

# **VENTURA COUNTY WATERWORKS DISTRICT NO. I**

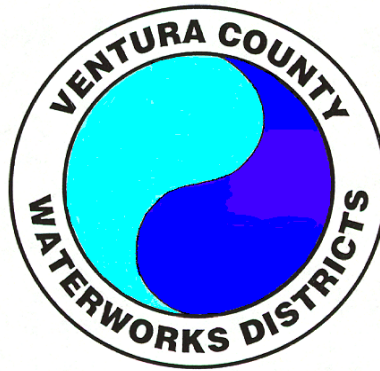
## **2010 Urban Water Management Plan**

JUNE 2011



Prepared By:  
**PSOMAS**

# **2010 URBAN WATER MANAGEMENT PLAN**



**Ventura County Waterworks District No. 1**

**June 28, 2011**

**P S O M A S**

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## ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
AF	Acre Feet
AFY	Acre Feet per Year
ARRA	American Recovery and Reinvestment Act of 2009
AWPF	Advanced Water Purification Facilities
BMP	Best Management Practices
BTEX	Benzene, Toluene, Ethyl Benzene, Xlenes
Calleguas	Calleguas Municipal Water District
CALSIM	California Water Allocation and Reservoir Operations Model
CAWCD	Central Arizona Water Conservation District
CCF	Hundred Cubic Feet
CCR	Consumer Confidence Reports
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CIMIS	California Irrigation Management Information System
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVWD	Coachella Valley Water District
DBP	Disinfection Byproducts
D/DBP	Disinfectants and Disinfection Byproducts
District,	Ventura County Waterworks District No. 1
VCWWD No. 1	
DMM	Demand Management Measure
DOE	Department of Energy
DPH	Department of Public Health
DWR	Department of Water Resources
DWCV	Desert Water Agency/Coachella Valley Water District
EIR	Environmental Impact Report
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPM	Emergency Procedures Manual
ESA	Endangered Species Act
ET	Evapotranspiration
Eto	Evapotranspiration From a Standardized Grass Surface
Etr	Evapotranspiration From a Standardized Alfalfa Surface
FCGMA	Fox Canyon Groundwater Management Agency
FY	Fiscal Year
GAC	Granular Activated Carbon
GAP	Green Acres Project
GPCD	Gallons Per Capita Per Day
GPD	Gallons Per Day

**ACRONYMS and ABBREVIATIONS (continued)**

GPF	Gallons Per Flush
GPM, gpm	Gallons Per Minute
GMP	Groundwater Management Plan
HAAs	Haloacetic Acids
IAWP	Interim Agricultural Water Program
ICS	Intentionally Created Surplus
IID	Imperial Irrigation District
In	Inches
IRP	Integrated Resources Plan
IRWM	Integrated Regional Water Management
LARWQCB	Los Angeles Regional Water Quality Control Board
LAS	Lower Aquifer System
LRP	Local Resources Program
M&I	Municipal and Industrial
MAF	Million Acre Feet
MCL	Maximum Contaminant Level
Metropolitan	Metropolitan Water District of Southern California
MGD, mgd	Million Gallons per Day
Mg/L	Milligrams Per Liter
MIN	Minutes
MOU	Memorandum of Understanding
MPR	Master Plan Report
MTBE	Methyl Tertiary Butyl Ether
MWD	Metropolitan Water District of Southern California
MWTP	Moorpark Wastewater Treatment Plant
NDMA	N-nitrosodimethylamine
NF	Nanofiltration
ng/L	Nanogram per Liter
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
PCE	Perchloroethylene
pci/L	Picocuries Per Liter
PEIR	Program Environmental Impact Report
PG&E	Pacific Gas & Electric
PHG	Public Health Goal
PPCPs	Pharmaceuticals and Personal Care Products
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
RHNA	Regional Housing Needs Assessment
RO	Reverse Osmosis
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board

### **ACRONYMS and ABBREVIATIONS (continued)**

SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition System
SCAG	Southern California Association of Governments
SCCWRRS	Southern California Comprehensive Water Reclamation and Reuse Study
SDCWA	San Diego County Water Authority
SDWA	Safe Drinking Water Act
SDP	Seawater Desalination Program
SMP	Salinity Management Pipeline
SNWA	Southern Nevada Water Authority
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet
TCE	Trichloroethylene
TDS	Total Dissolved Solids
THM	Trihalomethanes
TIN	Total Inorganic Nitrogen
UAS	Upper Aquifer System
ug/L	Micrograms Per Liter
ULFT	Ultra Low Flush Toilet
USBR	U.S. Bureau of Reclamation
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VOC	Volatile Organic Compounds
WARN	Water Agencies Response Network
WEROC	Water Emergency Response Organization of Orange County
WMP	Water Master Plan
WRCC	Western Regional Climate Center
WRF	Wastewater Reclamation Facility
WRP	Wastewater Reclamation Plant
WSAP	Water Supply Allocation Plan
WSDM	Water Surplus and Drought Management
WWTP	Wastewater Treatment Plant



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# 1 INTRODUCTION

## 1.1 PURPOSE AND UWMP SUMMARY

An Urban Water Management Plan (UWMP or Plan) prepared by a water purveyor is intended to ensure the appropriate level of reliability of water service sufficient to meet the needs of its various categories of customers during normal, single dry or multiple dry years. The California Water Management Planning Act of 1983 (Act), as amended, requires urban water suppliers to develop an UWMP every five years in the years ending in zero and five. Under normal circumstances, all 2010 UWMPs would have been due for submittal to the Department of Water Resources (DWR) by December 31, 2010; however, Senate Bill (SB) 7-7 (or SBX7-7) provided an additional six months to retail urban water supply agencies to allow them to conduct additional required water conservation analyses. Thus, the District's 2010 UWMP must now be adopted by July 1, 2011 and submitted to DWR within 30 days of adoption.

The legislature declared that the waters of the state are a limited and renewable resource subject to ever increasing demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful implementation of plans is best accomplished at the local level; that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources; that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The County of Ventura Waterworks District No. 1 (District or VCWWD No. 1) 2010 UWMP Update has been prepared in compliance with the requirements of the Act, as amended to 2010<sup>1</sup> (Appendix A), and includes the following major subjects:

- Water Service Area
- Water, Wastewater and Recycled Water Facilities
- Water Sources and Supplies
- Water Quality Information
- Water Reliability Planning
- Water Use Provisions
- Water Supply Baselines and Conservation Targets for Compliance with 20 x 2020 (SBX 7-7 Compliance)
- Water Demand Management Measures
- Water Shortage Contingency Plan
- Water Recycling

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<sup>1</sup> California Water Code, Division 6, Part 2.6; §10610, et. seq. Established by Assembly Bill 797 (1983).

## 1.2 UWMP UPDATE PREPARATION

This 2010 UWMP, prepared by Psomas and District staff, revises and updates for new requirements the 2005 UWMP prepared by Kennedy/Jenks Consultants for the District. It incorporates changes enacted by recent legislation including SB 1087 (2005), AB 1376 (2007), AB 1465 (2010), and SBX7-7 (2010). A brief summary of each of these legislative changes, as well as other related legislative changes, follows:

- SB 1087 (2005) – Requires retail water suppliers to include single family and multiple family projections for lower income and affordable households in their UWMPs. This legislation is intended to assist the water agencies in complying with the requirements Government Code Section 65589.7, which requires water suppliers to grant a priority for provision of service to housing units affordable to lower income households.
- AB 1376 (2007) – Requires each urban water supplier to notify the Planning Department of any City or County within which the supplier provides water with at least 60 days prior notice that the supplier will be reviewing the plan and considering amendments or changes to it.
- AB 1465 (2010) – Clarifies that urban water suppliers that are members of the California Urban Water Conservation Council (CUWCC) and comply with the provisions of the “*Memorandum of Understanding Regarding Urban Water Conservation in California*”<sup>2</sup> dated December 10, 2008, as it may be amended (MOU), may submit their annual reports required under the CUWCC MOU as evidence of compliance without the need for any additional documentation in their UWMPs.
- SBX7-7 (2010) – Requires urban water suppliers to include the following information in their 2010 UWMPs with respect to a targeted 20 percent water conservation reduction by 2020: (1) baseline daily per capita use; (2) urban water use target; (3) interim water use target; and (4) compliance daily per capita water use, including technical bases and supporting data for those determinations.
- SBX7-7 (2010) – Extends the deadline for adoption of urban retail water suppliers 2010 UWMPs until July 1, 2011, to provide sufficient time to prepare the additional required water conservation analyses described in the previous bullet.

Other legislation, which does not directly impact UWMPs, but affects eligibility for grants and loans, includes:

- AB 1420 (2007) – This legislation contains several provisions relating to urban water management plans, including:

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<sup>2</sup> The *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) was adopted in September 1991 by a large number of water suppliers, public advocacy organizations and other interested groups and most recently amended on December 10, 2008. The MOU created the *California Urban Water Conservation Council* and established 16 Best Management Practices (BMPs) for urban water conservation, recently refined to 14 BMPs.

- Conditions eligibility for State grant and loan funding to an urban water supplier awarded or administered by DWR, the State Water Resources Control Board, or California Bay-Delta Authority or its successor agency on the following factors: (1) the implementation of water demand management measures, including the extent of compliance with conservation measures described in the previously referenced “*Memorandum of Understanding Regarding Urban Water Conservation in California.*”
- Requires DWR, in consultation with the State Water Resources Control Board and the California Bay-Delta Authority or its successor agency, to develop eligibility requirements to implement the foregoing grant and loan conditions.
- Requires DWR, in consultation with the CUWCC, to convene a technical panel no later than January 1, 2009 to provide information and recommendations to the Department and the Legislature on new demand management measures, technologies and approaches. The panel and DWR must report to the legislature on their findings no later than January 1, 2010 and each five years thereafter.
- SBX3-27 (2009) – Exempts projects funded by the American Recovery and Reinvestment Act of 2009 (ARRA) from the conditions placed on state funding for water management to urban water suppliers regarding implementation of water conservation measures that were implemented under AB 1420.
- SBX7-7 – Repeals the existing grant funding conditions of AB 1420 on July 1, 2016 if they are not extended or altered prior to this date. After July 1, 2016, urban water retail water suppliers are required to be in compliance with the 20 percent by 2020 water use reduction goals to be eligible for state water management grants or loans.

The UWMP also incorporates water use efficiency efforts the District has implemented and reported in their Best Management Practices (“BMPs”) pursuant to the previously referenced *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU). The District became signatory and adopted the MOU with CUWCC on July 30, 1991. Copies of the last two BMP Reports for 2007-2008 and 2009-2010 are provided in Appendix F.

The sections in this Plan correspond to the outline of the Act, specifically Article 2, Contents of Plans, Sections 10631, 10632, and 10633. The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the District’s water utility.

To Assist Department of Water Resources staff in reviewing this UWMP, a copy of the DWR’s suggested checklist entitled *Urban Water Management Plan Checklist, Organized by Subject*<sup>3</sup> is provided in Appendix B. The left hand column of the checklist

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<sup>3</sup> Checklist provided in DWR’s Final Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan, March 2011 and available on DWR website at:  
<http://www.water.ca.gov/urbanwatermanagement/guidebook/>

notes where the applicable information described to the right can be found within the body of this Plan.

### ***Plan Adoption***

The 2010 UWMP was adopted by resolution of the Ventura County Board of Supervisors on June 28, 2011 following a public hearing. The Plan was submitted to the California Department of Water Resources and the State Library within 30 days of Board approval. Copies of the Notice of Public Hearing and the Resolution of Plan Adoption are included in Appendix C. Copies of the adopted Plan were made available to the public within 30 days after the Board of Supervisor's approval and a copy provided to the City of Moorpark and County of Ventura within the same time period.

A draft copy of the Plan was posted on the District's website prior to the public hearing where it was available to the public as well as the City of Moorpark, Calleguas Municipal Water District, the Fox Canyon Groundwater Management Agency, the Metropolitan Water District of Southern California, and all other interested parties.

### ***District Water Supply Summary***

The District relies on three sources for its long-term water supply: imported treated water, local groundwater, and recycled water. A more detailed discussion of the District's water sources is contained in Section 2 of this Plan.

Imported State Water Project (SWP) water is received from the Metropolitan Water District of Southern California (Metropolitan) through Calleguas Municipal Water District (Calleguas). Imported water currently accounts for approximately three-fourths of the District's water supply. Generally, the imported water received from Calleguas has been treated at the Metropolitan Jensen Treatment Plant.

Groundwater is produced from the East Las Posas Basin (Basin). The primary land usage in the Basin consists of agriculture, except for Municipal and Industrial (M&I) uses in the City of Moorpark, which is the only significant urban land use in the District. With the exception of iron and manganese removal at two wells, the quality of the water extracted from the Basin is such that chlorination is the only treatment required to comply with Title 22 Primary Standards. The aquifer system in the Basin is the Lower Aquifer System ("LAS"), consisting of the Fox Canyon Aquifer and the Grimes Canyon Aquifer. The Fox Canyon Groundwater Management Agency ("FCGMA") was established in Ventura County by a special act of the Legislature in 1982 to control groundwater overdraft and minimize seawater intrusion in the upper and lower aquifer systems in the Oxnard Plain. FCGMA exercises management of the Basin.

Recycled water is available from the Moorpark Wastewater Treatment Plant (MWTP), owned and operated by the District. The wastewater is treated to tertiary standards for distribution and uses for landscape and agricultural irrigation.

The District is in the process of developing a brackish groundwater treatment facility (Moorpark Desalter) to treat groundwater from the South Las Posas Basin that is high in salts and total dissolved solids (TDS) to augment imported potable water supplies.

### **Agency Coordination**

Development of the UWMP was led by the Ventura County Waterworks District No. 1 staff. District staff provided notification to the City of Moorpark and County of Ventura Planning Departments for development of the Plan and the County Clerk for the adoption of the Plan. Psomas coordinated with the City of Moorpark Planning Department for land use and population information. District staff was responsible for distribution of the Plan with assistance from Psomas.

The intent of this Plan is to focus on specific issues unique to the District's water service area. While some regional UWMP issues are introduced in this Plan, more detailed regional information is presented in Metropolitan's and Calleguas' 2010 Regional UWMPs.

To assist District staff in preparation of the District's 2010 UWMP, District staff and/or Psomas attended the following workshops facilitated by DWR and Metropolitan:

**Metropolitan:** 2010 UWMP Workshop held on August 18, 2010 at Metropolitan Headquarters.

**DWR:** Various on-line webinars held on November 30, 2010, December 16, 2010, January 5, 2011 and January 12, 2011.

**DWR:** 2010 UWMP Workshop at the Irvine Ranch Water District, March 8, 2011.

Table 1.2-1 lists the entities that District or Psomas coordinated with in the development of the District's 2010 UWMP. The City of Moorpark was notified of the District's public hearing for consideration of adoption of the Plan at least 60 days prior to the public hearing.



**Table 1.2-1**  
**Ventura County Waterworks District No. 1 UWMP Development**  
**Coordination and Public Involvement**

Entities	Coordination and Public Involvement Actions					
	Participated in UWMP Preparation	Used Agency Data as an Information Resource	Sent and/or Available To: Copy of Draft UWMP	Commented on Draft UWMP	Sent Notice of Public Hearing	Attended Public Hearing
County Planning Department	X	X	X		X	
VCWWD No. 1	X	X	X	X		X
City of Moorpark Planning Department	X	X	X	X	X	
Calleguas		X	X		X	
Fox Canyon Groundwater Management Agency		X	X	X	X	
Metropolitan		X	X		X	
General Public			X	X	X	

The District also utilized information from the Final Calleguas Municipal Water District (Calleguas) 2010 Regional UWMP, the Metropolitan Water District of Southern California (Metropolitan) November 2010 Final Regional UWMP, and the “*Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan*” prepared by DWR in preparing the District’s 2010 UWMP. This UWMP details the specifics as they relate to the District and its service area and will refer to Metropolitan, Calleguas, Fox Canyon Groundwater Management Agency and other agencies throughout. Numerous references were used in the development of this UWMP and are cited in footnotes throughout the Plan. Appendix D lists the numerous references used benefiting the development of this Plan.

The District’s water supply planning considers the programs of local and regional water agencies. The County of Ventura Water and Sanitation Department staff manages and administers activities, projects and programs to optimize the District’s water supply.

The UWMP is intended to serve as a general, flexible, and open-ended document that is updated every five years (or more often if necessary) to reflect changes in the District’s water supply trends, and conservation and water use efficiency policies. This Plan, along with the District’s Water Master Plan and other County planning documents, will be used

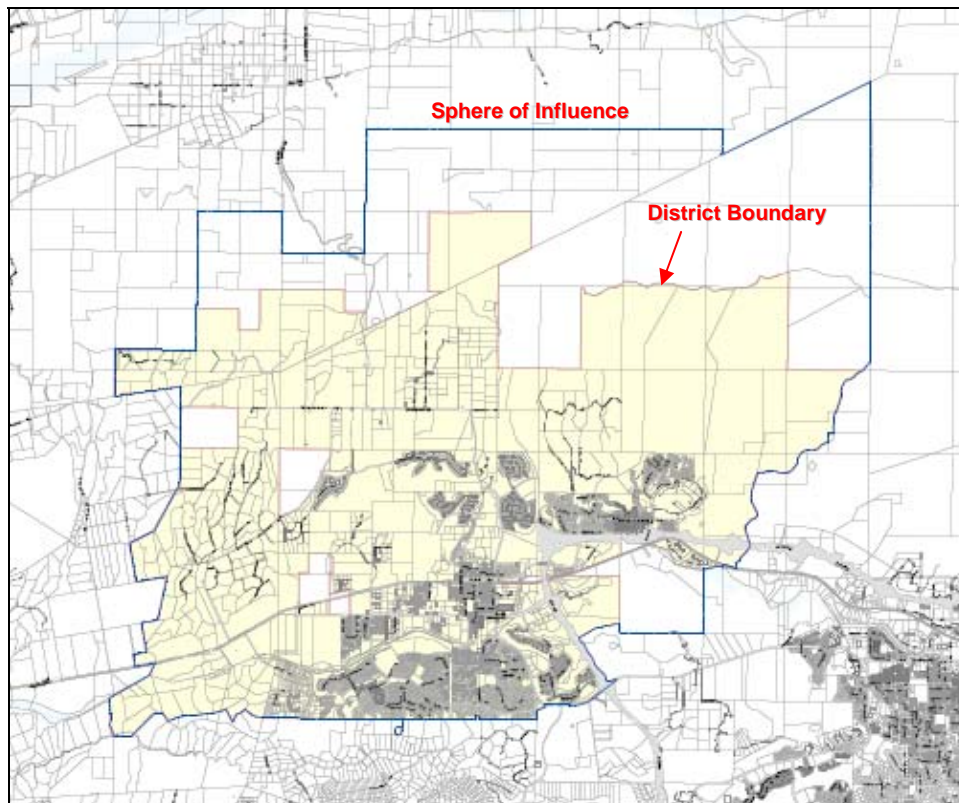
by District staff to guide the water use and management efforts through the year 2015. This UWMP will require an update in 2015.

### 1.3 VENTURA COUNTY WATERWORKS DISTRICT NO. 1 SERVICE AREA

#### ***Location/Characteristics***

The District was formed November 22, 1921, and serves approximately 38,703 residents through 10,573 service connections, including 10,401 residential and commercial service connections and 172 agricultural service connections. The District encompasses approximately 19,850 acres (31.0 square miles) and includes the City of Moorpark and contiguous unincorporated areas to the north and west. The Ventura County Board of Supervisors are the Board of Directors of the District. All proposed policy changes are reviewed by the Citizen's Advisory Committee prior to Board action. The Citizen's Advisory Committee members are appointed by the Ventura County Board of Supervisors. The District service area encompasses the City of Moorpark and surrounding portions of unincorporated lands in eastern Ventura County. The City of Moorpark is approximately five miles west of the City of Simi Valley and five miles north of the City of Thousand Oaks. A vicinity map of the District service area is shown in *Figure 1-1*.

**Figure 1-1**  
**Ventura County Waterworks District No. 1 Location Area**



### ***Climate Characteristics***

The District generally encompasses the City of Moorpark and the surrounding agricultural lands in the valley area of the Arroyo Las Posas and Highway 118. This area lies between the cities of Camarillo and Thousand Oaks to the south and the Santa Clara River valley to the north. The area is characterized by “Mediterranean” climate: a semi-arid environment with mild winters, warm summers and light to moderate rainfall. The climate for the District is consistent with coastal Southern California. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The average annual temperatures in the District service area are mild, ranging from an average high of 69.9 degrees and low of 45.3 degrees. January is usually the coldest month while July, August and September are usually the hottest months of the year. Precipitation averages 18 inches per year with most of the rain occurring in December through April. Average temperature, precipitation and evapotranspiration rate information for the District area is summarized in Table 1.3-1.

**Table 1.3-1**  
**Climate and Evapotranspiration**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
<b>AVG. MAX TEMP (°F)</b>	68	69	70	74	74	78	81	82	81	78	73	69	69.9
<b>AVG MIN TEMP (°F)</b>	41	42	43	46	49	53	56	57	55	50	44	41	45.3
<b>AVG RAINFALL (in.)</b>	4.18	4.65	3.57	0.8	0.3	0.05	0.01	0.08	0.32	0.52	1.45	2.48	18.41
<b>STD MONTHLY Eto (in.)</b>	2.17	2.8	4.03	5.1	5.89	6.6	7.44	6.82	5.7	4.03	2.7	1.86	55.1

Source: Rainfall and Temperatures from [www.weather.com/.../USCA0728](http://www.weather.com/.../USCA0728)

Evapotranspiration: CIMIS Reference Evapotranspiration Zones – Zone 9 for Moorpark area

### ***Evapotranspiration***

Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indication of how much water crops, lawn, garden, and trees need for healthy growth and productivity.

Precipitation and irrigation are the two primary sources of water that plants use. Plant leaves and soil surfaces temporarily retain some part of the water applied to the soil. This part is readily available for evaporation. The remaining part infiltrates into the soil. Plants extract the infiltrated water through their roots and transport it up to their leaves for photosynthesis, a process by which plants produce glucose (sugar).

Many factors affect ET including:

- Weather parameters such as solar radiation, air temperature, relative humidity and wind speed;
- Soil factors such as soil texture, structure, density and chemistry; and
- Plant factors such as plant type, root depth, foliar density, height and stage of growth.

The California Irrigation Management Information System (CIMIS), Department of Water Resources, Office of Water Efficiency is using well-watered actively growing closely clipped grass that is completely shading the soil as a reference crop at most of its over 130 weather stations. Therefore, reference evapotranspiration is mostly referred to as ETo on the CIMIS website. The monthly average ETo data shown in Table 1.3-1 (above) has been extracted from the CIMIS website containing the Evapotranspiration Zones. The District (and the Moorpark area) are located in Zone 9.

### ***Demographics***

The population of the District's water service area is currently estimated at 38,703 residents through 10,573 total service connections, including 10,401 residential and commercial service connections and 172 agricultural service connections. A major portion of land uses in the District is municipal (residential and commercial in the City of Moorpark) with the balance comprising agricultural lands. Increases in future water demand are expected to come from development of residential and commercial customers consistent with the buildout of the City of Moorpark as shown in their General Plan.

**Table 1.3-2**  
**Ventura County Waterworks District No. 1**  
**Water Service Area Population Projections**

	2010	2015	2020	2025	2030	2035
<b>District</b>	38,703	40,434	43,824	45,933	46,405	46,405

Source: Existing population from DOF. Future population from SCAG projections for City of Moorpark delayed by 5 years per City of Moorpark Community Development Director, David Bobardt. All water service area populations are increased by 3 percent above City population to account for areas outside City.

## 1.4 VENTURA COUNTY WATERWORKS DISTRICT NO. 1 FACILITIES

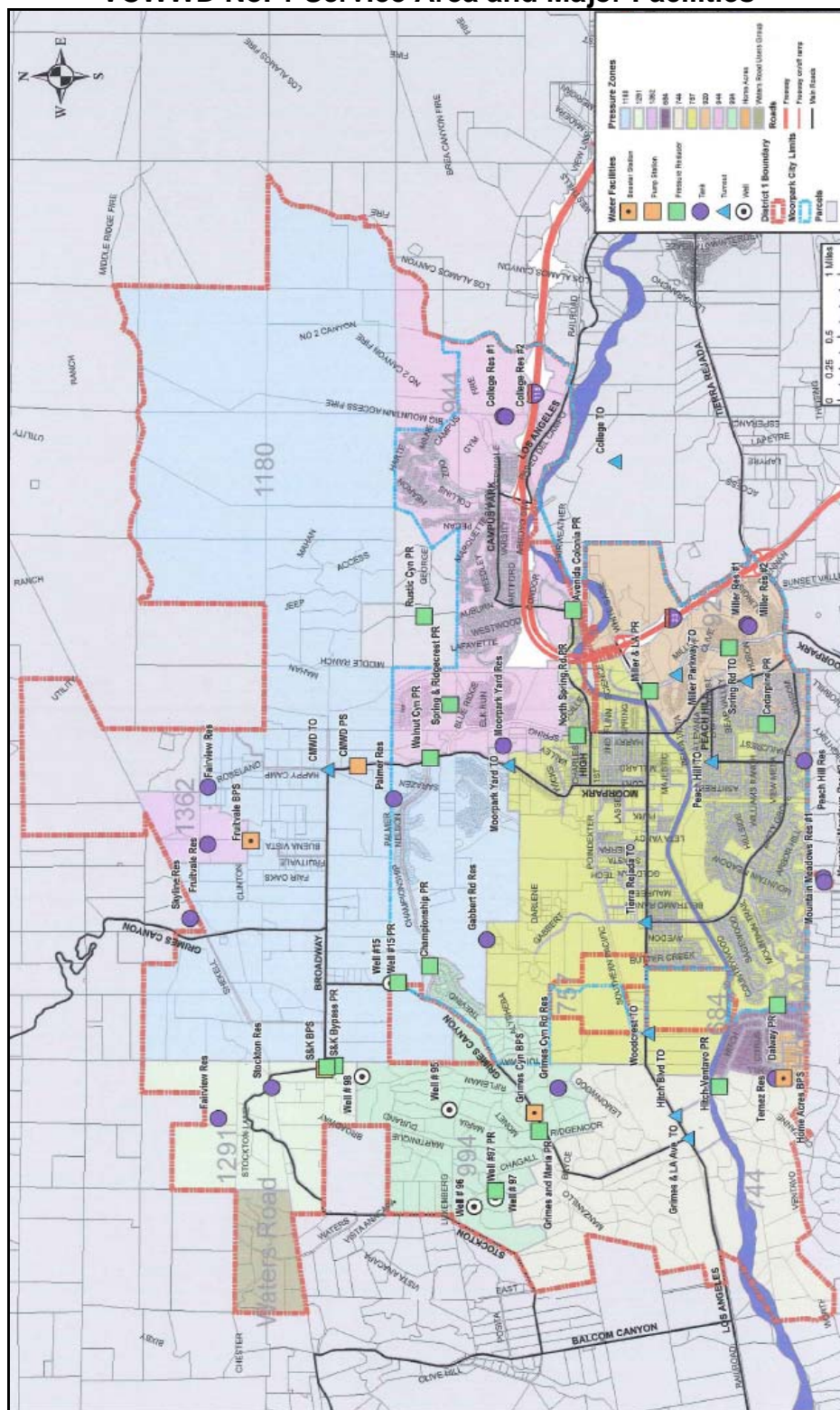
The District's water distribution system consists of 138 miles of water lines, seven pumping stations, 18 pressure reducing stations, six active production wells, nine imported water turnouts, and 18 reservoirs. In fiscal year 2010, the District supplied a total of approximately 11,714 acre-feet (AF) of water, 22% of it from local sources (including 2,165 AF of groundwater and 388 AF of recycled water) and 78% of it imported (9,161 AF). Domestic, commercial, industrial, and fire protection customers consume approximately 77% of the total water supplied. Agricultural customers consume the remaining 23%.

Local water, treated by chlorination, is supplied from six groundwater wells owned and operated by the District. Imported water comes from the State Water Project through the Metropolitan Water District (Metropolitan) and Calleguas Municipal Water District (Calleguas). Water from the State Water Project originates in northern California. This water is captured in reservoirs north of Sacramento and released through the natural rivers and streams into the Sacramento-San Joaquin Delta. The 444-mile long California Aqueduct then carries water from south of the delta to State Water Project contractors, including Metropolitan. Metropolitan treats the water at Jensen Treatment Plant located in Granada Hills. Calleguas purchases water from Metropolitan and purveys it to 26 water suppliers within Ventura County, including the District.

The District owns, operates and maintains the Moorpark Wastewater Treatment Plant (MWTP) located at 9550 Los Angeles Avenue just west of Moorpark City limits south of State Highway 118. The original MWTP was completed in 1965 as an interim treatment facility with a capacity of 1 million gallons per day (mgd). It has since undergone several upgrades, the latest of which was completed in February 2010 and increased capacity to 5 mgd. In August 2003, the District began supplying recycled water for golf course irrigation.

The District's service area and major supply and distribution facilities are shown on *Figure 1-2*. The Ventura County Waterworks District No. 1 Water System Master Plan Update dated August 2008 details the District's major facilities and is referenced for more detailed information.

**Figure 1-2  
VCWWD No. 1 Service Area and Major Facilities**





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## **2 WATER SOURCES AND SUPPLIES**

### **2.1 WATER SOURCES**

The District utilizes a combination of water supplies to meet its demands. The most significant is potable water imported from Metropolitan Water District of Southern California (Metropolitan) through the local wholesale agency, Calleguas Municipal Water District (Calleguas). Local groundwater provides the next most prevalent source of water. The District also relies on recycled water for the balance of their needs. Historically, imported water has made up approximately 80 percent of the District's water supply. In times of drought or limited groundwater allocations the District must rely almost completely on imported water from Metropolitan. With improvements to their wastewater operations, recycled water has become more available to meet demands for irrigation, notably for landscape.

The District's current sources of supply are described below.

#### **2.1.1 Imported Water**

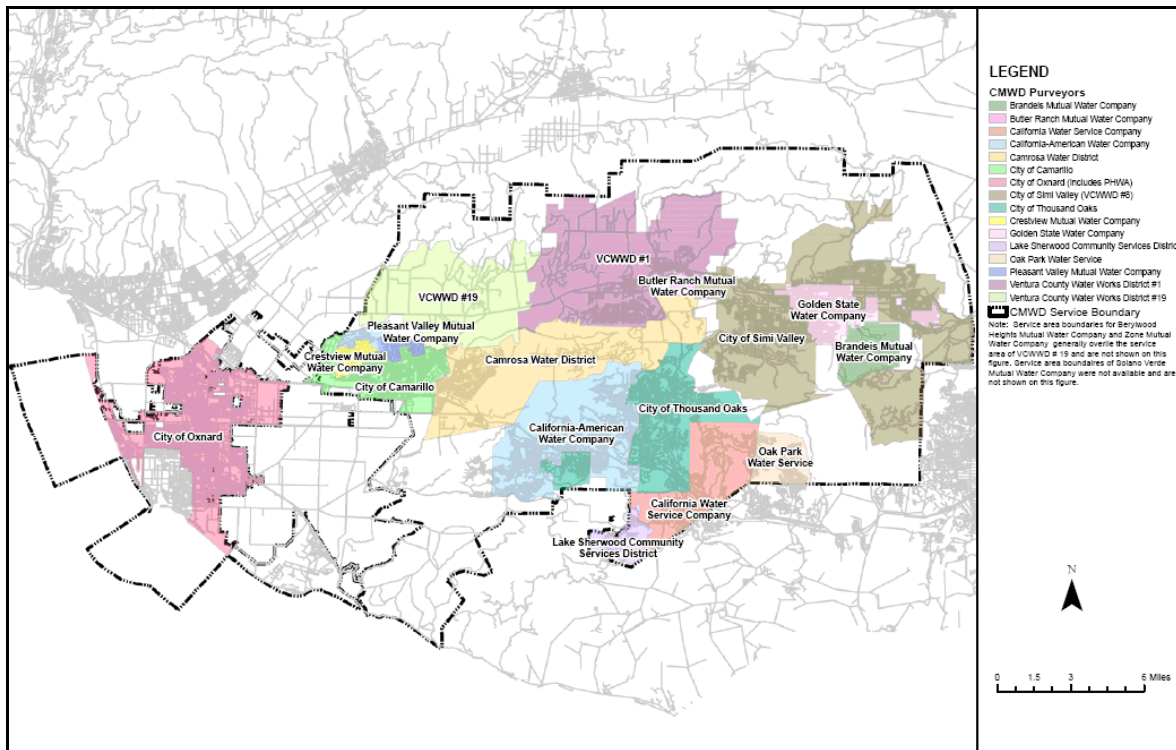
Treated potable water is imported to the District from Calleguas which, in turn, receives its water from Metropolitan.

#### ***Calleguas Municipal Water District (Calleguas)***

Calleguas is an enterprise special district that was formed by the voters of southern Ventura County in 1953 for the purpose of providing a safe, reliable water supply. Named for the watershed in which it is located, Calleguas is a public agency established under the Municipal Water District Act of 1911. It is governed by a five-member board of directors elected by voters to represent each of the five geographic divisions within the District. In 1960, Calleguas became a member agency of Metropolitan, which provides wholesale water from the Colorado River via the Colorado Aqueduct and northern California via the State Water Project (SWP). Metropolitan is comprised of 26 member agencies, and Calleguas is the fifth largest member agency in terms of average annual water deliveries. *Figure 2-1* shows Calleguas' service area boundaries.

Calleguas distributes high quality drinking water on a wholesale basis to 19 local purveyors, who in turn deliver water to area residents, businesses, and agricultural customers. These purveyors are listed in Table 2.1-1 and include VCWWD No. 1 (District). Approximately three-quarters of Ventura County residents (roughly 630,000 people) depend on Calleguas for all or part of their water and the water supplied by Calleguas currently represents approximately 73 percent of the total municipal and industrial water demand within its service area. It is important to note that a large portion of the water use in Ventura County is for agricultural purposes. Agricultural demands are generally met by the District or other private entities using groundwater from various basins underlying the area.

**Figure 2-1**  
**Calleguas Municipal Water District Service Area**



**Table 2.1-1**  
**Calleguas Purveyors**

Berylwood Heights Mutual Water Company	Crestview Mutual Water Company
Brandeis Mutual Water Company	Golden State Water Company
Butler Ranch Mutual Water Company	Lake Sherwood Community Services District
California Water Service Company	Oak Park Water Service
California-American Water Company	Pleasant Valley Mutual Water Company
Camrosa Water District	Solano Verde Mutual Water Company
City of Camarillo	VCWWD No. 1
City of Oxnard	VCWWD No. 19
City of Simi Valley (VCWWD No. 8)	Zone Mutual Water Company
City of Thousand Oaks	

### **Metropolitan Water District of Southern California (Metropolitan)**

Metropolitan was formed in the late 1920's. At that time, Ventura County was virtually all an agriculturally-based economy with the cities of Oxnard, Ventura, Santa Paula and Fillmore the only urban-style development. Some other small towns and residential communities existed at that time but they were primarily related to the agricultural business. Metropolitan was formed for the purposes of importing water from the Colorado River to the communities of Southern California. Collectively, the charter member cities and water agencies recognized the limited water supplies available within the region, and realized that continued prosperity and economic development of Southern California depended upon the acquisition and careful management of an adequate supplemental water supply. This foresight made the continued development of Southern California and Ventura County possible.

Metropolitan also acquires water from Northern California via the State Water Project (SWP). The Metropolitan development of the SWP and the Colorado River Aqueduct (CRA) supplies water to most of southern California. As a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies. One such member agency is Calleguas. Metropolitan's service area is depicted in *Figure 2-2*.

**Figure 2-2**  
**Metropolitan Water District Service Area**



Source: Service area map extracted from Metropolitan's website at:  
<http://www.mwdh2o.com/mwdh2o/pages/memberag/member03.html>

### **2.1.2 Groundwater**

Groundwater has been used in Ventura County for many years, for agricultural irrigation and municipal and industrial water supply. The aquifer system in groundwater basin underlying the areas south of the Santa Clara River valley (the Oxnard plain and the foothill areas around Oxnard, Camarillo and Moorpark) is generally stratified into the Lower Aquifer System (“LAS”), consisting of the Fox Canyon Aquifer and the Grimes Canyon Aquifer and the Upper Aquifer System (“UAS”).

Historically, the aquifer system has been in a state of overdraft, mostly in the Lower Aquifer System (LAS), which has led to seawater intrusion. The non-consumptive portion of imported water utilized by the District is treated at local wastewater treatment facilities and discharged to the Calleguas Creek watershed. This water ultimately percolates into the UAS, increasing groundwater levels in the region. Unfortunately, water in the UAS has elevated levels of chlorides and TDS. Numerous agencies are active participants in regional efforts to put some of this water to beneficial use by advancing groundwater desalter projects (groundwater recovery).

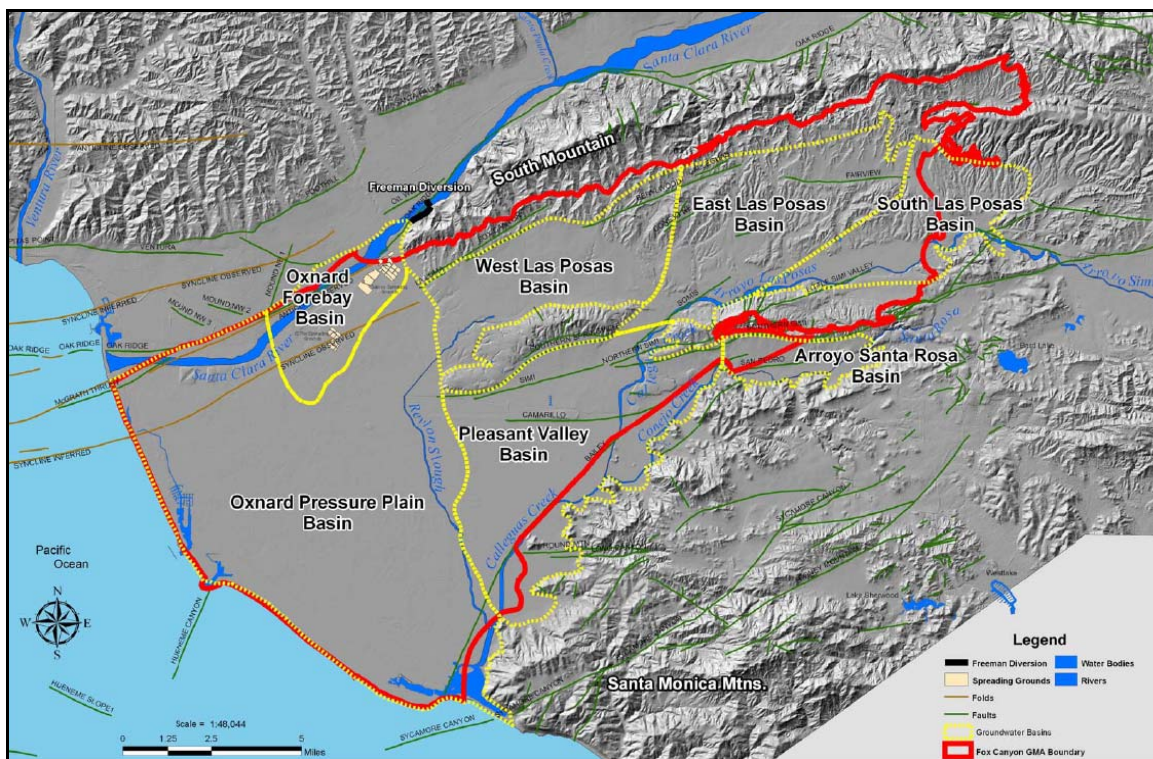
The East Las Posas Basin supplies all the local groundwater for the District. The East Las Posas Basin is 9 miles long and 4.5 miles wide with land usage consisting primarily of agriculture except in Moorpark, which is the only significant urban development in the basin. Geological investigations recently led to the discovery of a north/south fault that distinctly divides the basin. The two halves are the East Las Posas and West Las Posas Basins. The District’s wells are located in the East Las Posas Basin. The Fox Canyon Groundwater Management Agency (FCGMA) boundary and basins within it are illustrated on *Figure 2-3*. A copy of the latest FCGMA Groundwater Management Plan is included as Appendix H along with pertinent FCGMA ordinances. The quality of the water in the basin is such that chlorination is the only treatment required to comply with the Title 22 Primary Standards. The primary aquifer system, the LAS, consists of the Fox Canyon Aquifer and the Grimes Canyon Aquifer. Supply is primarily through wells with yields of 1,000 to 1,500 gallons per minute (gpm). Although estimates of storage capacity vary, the North Las Posas Basin, which terminology is no longer used and generally encompasses the East and West Las Posas Basins, is generally believed to have a total storage capacity between 3,000,000 and 3,500,000 acre-feet (AF) (California Department of Water Resources, 1975 and 1953 and Calleguas, 1989). It should be noted that only a fraction of this total storage capacity is currently useable on an annual basis due to potentially significant impacts such as water quality degradation, increased pumping lifts, and subsidence.

The Las Posas Valley Groundwater Basin (DWR Basin No. 4-8), which generally includes the East Las Posas Sub-Basin, is not adjudicated and based on the DWR official departmental bulletins, California’s Groundwater Bulletin 118 Updated 2003 and Bulletin 160, the California Water Plan Update 2009, the Basin is not specifically identified as a basin in an overdraft condition. However, the California Water Plan Update does state



that groundwater overdraft is a challenge for the South Coast Hydrologic Region<sup>4</sup>, which includes the Basin. FCGMA was formed primarily to manage water quality and managing extractions aids in this goal. FCGMA maintains, however, that the Las Posas Basin is in overdraft relative to the native water supply to the Basin but has been sustained in some areas by non-native inflows from wastewater treatment plant discharges, urban runoff, and shallow groundwater dewatering discharges from upstream areas. FCGMA feels that since the non-native inflows are causing widespread water quality impacts to the Basin, they may not be considered part of the Basin yield and these non-native inflows may be significantly reduced in the future as a result of recycled water re-use and/or actions to comply with State TMDL for the watershed.<sup>5</sup>

**Figure 2-3**  
**Fox Canyon Groundwater Management Agency and Basins**



### **Ventura County Waterworks District No. 1 (District) Wells**

Groundwater is currently produced from six wells owned and operated by the District with production varying from 500 gallons per minute (gpm) to 1,100 gpm, with an existing total system capacity of approximately 5,350 gpm as shown in Table 2.1-2.

<sup>4</sup> The California Water Plan Update 2009 is available on DWR's website at:  
[http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v3\\_southcoast\\_cwp2009.pdf](http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v3_southcoast_cwp2009.pdf)

<sup>5</sup> FCGMA, letter from Bryan Bondy to Cefe Munoz, June 8, 2011.



**Table 2.1-2  
Active Well Capacities**

Well No.	Design Flow (gpm)	Status
15	500	Active
95	750	Active
96	1,000	Active
97	1,000	Active
98	1,000	Active
20 (Fe & Mn Trtmt)	1,100	Active
<b>Total Active Capacity</b>	<b>5,350</b>	
Phase 1 Desalter Wells	3,100	Planned
<b>Total Active &amp; Planned Capacity</b>	<b>8,450</b>	

Note: Well 20 became operational in April 2011

Table 2.1-3 summarizes the total amount of groundwater pumped by the District and shows the breakdown by well for fiscal years 2005 through 2010.

**Table 2.1-3  
Amount of Groundwater Pumped by Well (AF)**

Well No.	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10
15	127.9	10.7	0.0	372.7	629.3	631.9
95	59.6	66.0	148.6	420.2	271.1	275.2
96	11.6	28.2	90.0	507.8	87.1	577.1
97	35.4	20.2	60.3	147.4	614.0	373.3
98	14.1	33.7	115.3	44.9	481.3	307.6
<b>Total</b>	<b>248.6</b>	<b>158.8</b>	<b>414.2</b>	<b>1,493.0</b>	<b>2,082.8</b>	<b>2,165.1</b>

Table 2.1-4 shows the amount of groundwater that is projected to be pumped from the Basin in the next 25 years. The amount shows the 5,000 AFY of recovered groundwater projected to be pumped and treated through the proposed first phase of the reverse osmosis desalter project (Moorpark Desalter) commencing in 2015 and 10,000 AFY in a subsequent phase commencing in 2020. Projected imported water is shown at the bottom of Table 2.1-4 and a total supply shown for all sources, excluding recycled water. The amount and timing of the Recovered Groundwater shown in Table 2.1-4 is subject to an on-going study regarding the impacts of the project on the groundwater basin and subsequent agreement with FCGMA. If these projected volumes are not achieved, imported water would be increased to make up the difference between the amount projected and that achieved.

**Table 2.1-4**  
**Amount of Groundwater Projected to be Pumped**  
**(Rounded to Nearest 10 AF)**

Type	2015	2020	2025	2030	2035
Potable Groundwater	2,240	2,240	2,240	2,240	2,240
Recovered Groundwater	5,000	10,000	10,000	10,000	10,000
Groundwater Total	7,240	12,240	12,240	12,240	12,240
Imported	5,822	1,045	1,804	2,602	3,441
Groundwater & Imported	13,062	13,285	14,044	14,842	15,681

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### **3 WATER QUALITY**

#### **3.1 WATER QUALITY OF EXISTING SOURCES**

As required by the Safe Drinking Water Act, which was reauthorized in 1996, the District provides annual Water Quality Reports to its customers; also known as Consumer Confidence Reports (CCR). This mandate is governed by the Environmental Protection Agency (EPA) and the California Department of Public Health (CDPH) to inform customers of their drinking water quality. In accordance with the Safe Drinking Water Act, the District monitors a number of regulated and unregulated compounds in its water supply. The results from this testing were included in the District's 2009 Annual Water Quality Report<sup>6</sup>, a copy of which was mailed to all residents of District's water service area. As noted in that report, the District vigilantly safe-guards its water supply and, as in years past, the water delivered to District customers meets the standards required by the state and federal regulatory agencies. As mentioned earlier, the District's sources of potable water currently include imported water supplies and groundwater.

##### **3.1.1 Imported Water**

The District receives imported water through Calleguas from Metropolitan, which receives raw water from northern California through the SWP and the Colorado River Aqueduct. Metropolitan water is treated in accordance with potable standards at filtration plants located throughout Southern California. The District receives its imported water which is treated at the Joseph Jensen Filtration Plant located in Granada Hills, through its Metropolitan member agency, Calleguas, via Metropolitan's West Valley Feeder No. 2 Pipeline. Calleguas' sole connection to Metropolitan is located in the City of Chatsworth at Calleguas' East Portal Facility. From this point water is conveyed 1.4 miles through the Perliter Tunnel into Simi Valley, where it is distributed through Calleguas's transmission system, injected into the Las Posas aquifer, or stored in Lake Bard.

Water stored in Lake Bard is treated in the Lake Bard Water Treatment Plant primarily in summer months to supplement the capacity of Metropolitan for delivery to the western portion of the Calleguas service area. This treatment plant can also supply the entire Calleguas service area during short durations if service from Metropolitan is interrupted or reduced due to routine maintenance or emergencies.

Metropolitan Water District tests and treats its water for microbial, organic, inorganic, and radioactive contaminants as well as pesticides and herbicides. Protection of Metropolitan's water system continues to be a top priority. In coordination with its 26 member agencies, Metropolitan added new security measures in 2001 and continues to upgrade and refine procedures. Changes have included an increase in the number of water quality tests conducted each year (more than 300,000 tests are conducted for over

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<sup>6</sup> The Ventura County Waterworks District No. 1 2009 Annual Water Quality Report can be viewed on the District's website at:  
[http://portal.countyofventura.org/portal/page/portal/PUBLIC\\_WORKS/WaterSanitation/water\\_quality/CCR%20Dist%201%202009%20CA000591-1\\_WR.pdf](http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/WaterSanitation/water_quality/CCR%20Dist%201%202009%20CA000591-1_WR.pdf)

200 possible compounds) as well as contingency plans that coordinate with the Homeland Security Office's multicolored tiered risk alert system.<sup>7</sup> Metropolitan also has one of the most advanced laboratories in the country where water quality staff perform tests, collect data, review results, prepare reports, and research other treatment technologies. Although not required to do so, Metropolitan monitors and samples substances that are not regulated but have captured scientific and/or public interest. Metropolitan has tested for chemicals such as perchlorate, methyl tertiary butyl ether (MTBE), and chromium VI among others.

Metropolitan's October 2010 Integrated Water Resources Plan (IRP) Update<sup>8</sup>, notes that water quality is intrinsically tied to supply reliability. Additionally, Metropolitan's 2010 Regional Urban Water Management Plan, indicates each of their major sources of water (the SWP and the CRA) has specific water quality problems. However, that Plan also notes "Metropolitan has not identified any water quality risk that cannot be mitigated."<sup>9</sup>

The major water quality concerns Metropolitan identified in its 2010 Regional Urban Water Management Plan include the following: (1) salinity; (2) perchlorate; (3) total organic carbon and bromide (disinfection byproduct precursors); (4) nutrients (as it relates to algal productivity); (5) arsenic; (6) uranium; (7) chromium VI; (8) N-nitrosodimethylamine (NDMA); and (9) pharmaceuticals and personal care products (PPCPs). Each of these constituents of concern, as well as one additional decreasing concern (MTBE) is addressed in further detail below.

### **3.1.2 Salinity**

Water from the CRA has the highest level of salinity of all Metropolitan sources of supply, averaging 630 milligrams per liter (mg/L) since 1976.<sup>10</sup> Several actions have been taken at the state and federal level to control Colorado River salinity including (1) the International Boundary and Water Commission approval of Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River in 1973; (2) the U.S. President's approval of the Colorado River Basin Salinity Control Act in 1974 and (3) the formation of the Colorado River Basin Salinity Control Forum. In 1975, water quality standards and a plan for controlling salinity were approved by the EPA.

In contrast, water from the SWP is significantly lower in TDS, averaging 250 mg/L over the long term in water supplied through the East Branch and 325 mg/L in water supplied through the West Branch, which is the supply source for Calleguas and the District. Because of the lower salinity, Metropolitan blends SWP water with Colorado River water

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<sup>7</sup> Per Metropolitan's 2010 Regional Urban Water Management Plan, page 4-17 which can be viewed on their website at [http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP\\_2010.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf)

<sup>8</sup> MWD's October 2010 Integrated Water Resources Update can be viewed on their website at <http://www.mwdh2o.com/mwdh2o/pages/yourwater/irp/IRP2010Report.pdf>

<sup>9</sup> Per Metropolitan's 2010 Regional Urban Water Management Plan, page 4-1 which can be viewed on their website at [http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP\\_2010.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf)

<sup>10</sup> Ibid., page 4-3

to reduce the salinity in the water delivered to its customers. Metropolitan's board has adopted a salinity objective of 500 mg/L for blended imported water as defined in Metropolitan's Salinity Management Action Plan. Metropolitan estimates that the objective can be met in seven out of ten years. In the other three years, hydrologic conditions would result in increased salinity and reduced volume of SWP supplies.

### ***Perchlorate in the Colorado River***

Perchlorate, a contaminant of concern, which can be found in rocket propellant and some types of munitions and fireworks, is believed to inhibit the thyroid's ability to process iodide and produce hormones required for normal growth and development. Perchlorate has been detected at low levels in the Colorado River water supply. It also has the ability to quickly dissolve and become mobile in groundwater. Perchlorate is difficult to remove from water supplies with conventional water treatment. Successful treatment technologies include nanofiltration, reverse osmosis, biological treatment, and fluidized bed bioreactor treatment. Metropolitan continues to monitor perchlorate contamination of the Colorado River. Perchlorate levels in the Colorado River have been declining in recent years, following installation of remedial treatment systems at industrial point source locations in the Las Vegas area beginning in 1998. These efforts have reduced perchlorate levels entering the Colorado River from Las Vegas by up to 90 percent since 1998.

As a result of the aforementioned aggressive clean-up efforts, perchlorate levels in Colorado River water at Lake Havasu have decreased significantly in recent years from their peak of 9 micrograms per liter ( $\mu\text{g/L}$ ) in May 1998. Since 2002, levels have remained less than 6  $\mu\text{g/L}$  and have typically been less than 2  $\mu\text{g/L}$  since June 2006. For comparison purposes, the California Department of Public Health (CDPH), on October 18, 2007, established a primary drinking water standard for perchlorate with a Maximum Contaminant Level (MCL) of 6  $\mu\text{g/L}$ . There is currently no federal drinking water standard for perchlorate, but the USEPA is in the process of making its final regulatory determination for this contaminant<sup>11</sup>

In addition to the Lake Havasu site, Metropolitan also routinely monitors perchlorate at 34 locations within its system. Monitoring data from these locations reflect non-detectable levels (below 2  $\mu\text{g/L}$ ). Metropolitan has not detected perchlorate in the SWP since monitoring began in 1997.

### ***Total Organic Carbon and Bromide (Disinfection By-Product Precursors)***

SWP water supplies contain levels of total organic carbon and bromide that are a concern to Metropolitan's objective of maintaining safe drinking water supplies. When water is disinfected at treatment plants, certain chemical reactions can occur with these impurities that can form Disinfection Byproducts (DBP). DBPs include trihalomethanes (THMs) and haloacetic Acids (HAAs). THMs and HAAs have been found to cause cancer in laboratory animals. Inherent in any through-Delta water movement is the high organic

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<sup>11</sup> Ibid., page 4-8

and bromide loading imposed on the water from agricultural runoff and salt water intrusion. This poses significant treatment challenges to the receiving end users, like Metropolitan, when it comes to avoiding problems with DBPs and the formation of THMs. With this in mind, it is imperative that the quality of SWP water delivered to Metropolitan be maintained at the highest levels possible.

Water agencies such as Metropolitan, began complying with new regulations to protect against the risks associated with DBP exposure in January 2002. This USEPA rule, known as the Stage 1 Disinfectants and Disinfection Byproducts (D/DBP) Rule, required water systems to comply with new MCLs by using appropriate treatment techniques to improve control of DBPs. The USEPA then promulgated the Stage 2 D/DBP Rule in January 2006, which makes regulatory compliance more challenging because it is now determined on a locational basis, rather than on a distribution system-wide basis.

To ensure the implementation of cost-effective solutions, source water quality improvements must be combined with appropriate water treatment technologies. In addressing this requirement, Metropolitan looked first at each of its five treatment plants. Two of those (Mills and Jensen) receive SWP water exclusively, while the other three (Skinner, Weymouth and Diemer) receive a blend of SWP and Colorado River water. In 2003, 2005, and 2010, Metropolitan completed upgrades to its Mills, Jensen and Skinner water treatment plants, respectively, to utilize ozone as its primary disinfectant. This ozonation process avoids the production of certain regulated disinfection byproducts that would otherwise form in the chlorine treatment of SWP water. The non-ozone plants utilizing blended water have met federal guidelines for these byproducts through managing the blend of SWP and Colorado River water. To maintain the byproducts at a level consistent with federal law, Metropolitan limits the percentage of water from the SWP used in each plant. Metropolitan's Board has also adopted plans to install ozonation at its other two blend plants (Weymouth and Diemer) in the coming years.

### **Nutrients**

Increased nutrient loading (phosphorous and nitrogen compounds) can lead to the formation of algal and aquatic weed growth, noxious taste and odor compounds, algal toxins and an increase in quagga and zebra mussels and other invasive biological species. The formation or accumulation of these undesired elements has negative ramifications upon the efficiency of the water treatment and conveyance processes and inevitably leads to consumer complaints. Metropolitan has therefore taken action to minimize nutrient loading in both its SWP and CRA delivery sources as described in the following paragraphs.

Wastewater discharges, agricultural drainage and nutrient-rich soils in the California Delta all contribute to the high levels of nutrient loading entering SWP facilities. Metropolitan and other local water agencies have therefore been working with Delta area wastewater agencies in an effort to minimize these nutrient loadings. Metropolitan also has a comprehensive program to monitor and manage algae growth in its source water reservoirs. In some cases, these monitoring efforts coupled with consumer taste and odor

complaints have resulted in the need to temporarily bypass some of these reservoirs, which can have a short-term impact on available water supplies.

Nutrient levels in the Colorado River are much lower than in the SWP, which allows Metropolitan to blend CRA water with SWP and thereby greatly reduce overall nutrient levels in the water supplied to its member agencies. Nevertheless, nutrient loading in the CRA system is still a concern given projected growth patterns in the Las Vegas area. For this reason, Metropolitan continues to work with entities along the Colorado River to promote good wastewater management practices which lead to reduced phosphorous and nutrient loadings.

As a result of the aforementioned monitoring and management programs, Metropolitan believes there should be no impact on future availability of water supplies due to high nutrient loadings.

### ***Arsenic in Surface Waters***

Arsenic, which has been linked to certain cancers and skin conditions, is a naturally occurring element found in rocks, soil, water, and air. Arsenic from these sources can enter the water supply through the natural erosion of rocks, as well as the dissolution of ores and minerals. Arsenic can also be found in wood preservatives, alloying agents, certain agricultural applications, semi-conductors, paints, dyes, and soaps. Agriculture and industrial discharges from these sources can contribute to elevated levels of arsenic in drinking water supplies.

The MCL for arsenic in domestic water supplies was lowered to 10 µg/L (from 50 µg/L), with an effective date of January 2006 in the federal regulations, and an effective date of November 2008 in California's regulations for both groundwater and surface water supplies. Metropolitan water supplies have historically had low levels of arsenic and have therefore not required treatment to comply with this standard. However, some of Metropolitan's water supplies are supplemented by groundwater storage programs, which in some cases have arsenic concentrations near the MCL. In general, these groundwater storage projects are used to supplement supplies only during low SWP allocation years. In some instances, Metropolitan has restricted the use of such groundwater programs, thereby limiting the introduction of arsenic into the SWP. Metropolitan has also worked with one of its groundwater banking partners in constructing a pilot arsenic treatment facility to reduce arsenic concentrations in this supply source.

In April 2004, based on reported lung and urinary bladder cancer risk data, California's Office of Environmental Health Hazard Assessment (OEHHA) set a public health goal (PHG) for arsenic of 0.004 µg/L. Monitoring results reported on CDPH's website for the period 2002-2005 showed arsenic is ubiquitous in drinking water sources, reflecting its natural occurrence. Those results also show many sources have arsenic levels above the 10 µg/L MCL (e.g., Southern California drinking water sources containing arsenic



concentrations over 10 µg/L include San Bernardino (64 sources), Los Angeles (48 sources), Riverside (26 sources), Orange (4 sources), and San Diego (5 sources)).<sup>12</sup>

In all cases, arsenic levels detected in Metropolitan's SWP and CRA source waters and water treatment plant effluent have been below the 10 µg/L MCL. Nevertheless, the state detection level for purposes of reporting arsenic is 2 µg/L. Between 2001 and 2008, arsenic levels in Metropolitan's water treatment plant effluents ranged from not detected (< 2 µg/L) to 2.9 µg/L. For Metropolitan's source waters, levels in Colorado River water ranged from not detected to 3.5 µg/L, while levels in SWP water ranged from not detected to 4.0 µg/L.

### **Uranium**

Uranium is a contaminant of concern in the water from the Colorado River. A 16-million ton pile of uranium mine tailings is located approximately 750 feet from the river at Moab, Utah. Rainfall seeps through this pile and contaminates the local groundwater which flows to the river. Additionally, due to the proximity of the pile to the river, there is a potential for the tailings to enter the river as the result of a catastrophic flood event or other natural disaster.

Previous investigations have shown uranium concentrations within the pile near the Moab site, at levels significantly above the California MCL of 20 picocuries per liter (pCi/L). Metropolitan has been monitoring for uranium in the Colorado River Aqueduct and at its treatment plants since 1986 and at Lake Powell since 1998. Uranium levels measured at Metropolitan's intake have ranged from 1 to 6 pCi/L, which are well below the California MCL. Conventional drinking water treatment, as employed at Metropolitan's water treatment plants, can remove low levels of uranium, however these processes would not be protective if a catastrophic event washed large volumes of tailings into the Colorado River.

The U.S. Department of Energy (DOE) is responsible for remediating the site near Moab, which includes removal and offsite disposal of the tailings and onsite groundwater remediation. Metropolitan continues to track progress of the remediation efforts, provide the necessary legislative support for rapid cleanup, and work with Congressional representatives to support increased annual appropriations for this effort. Site remedial actions conducted since 1999 have focused on removing contaminated water from the pile and from underlying groundwater. Through 2009, over 2,700 pounds of uranium has been removed from contaminated groundwater.

DOE issued its Final Environmental Impact Statement in July 2005, which recommended permanent offsite disposal by rail to a disposal cell at Crescent Junction, Utah, located approximately 30 miles northwest of the Moab site. Such rail shipments began in April 2009, with over 1 million tons of mill tailings shipped to the Crescent Junction disposal

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<sup>12</sup> Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Arsenic.aspx> - note the numbers reported on this site can change as the site is updated.

cell through March 2010. DOE anticipates shipment of an additional two million tons of tailings by September 2011 with complete removal by 2025.

Another uranium-related issue, which could negatively impact CRA water supplies, began receiving attention in 2008 as a result of renewed worldwide interest in nuclear energy and the associated increase in uranium mining claims filed throughout the western United States. Of particular interest to Metropolitan were thousands of mining claims filed near Grand Canyon National Park and the Colorado River watershed. Metropolitan has since sent letters to the U.S. Secretary of Interior to highlight source water protection and consumer confidence concerns related to uranium exploration and mining activities near the Colorado River, and advocate for close federal oversight over these activities. In 2009, Secretary of Interior Ken Salazar announced a two-year hold on new mining claims on one million acres adjacent to the Grand Canyon to allow necessary scientific studies and environmental analyses to be conducted. In 2009, H.R. 644, the Grand Canyon Watersheds Protection Act was introduced and if enacted, would permanently withdraw areas around the Grand Canyon from new mining activities.

### **Chromium VI**

Like arsenic, chromium is a naturally occurring element found in rocks, soil, plants, and animals. Chromium III is typically the form found in soils and is an essential nutrient that helps the body use sugar, protein, and fat. Chromium VI is used in a number of industrial applications including electroplating, stainless steel production, leather tanning, textile manufacturing, dyes and pigments, wood preservation and as an anti-corrosion agent. Chromium occurs naturally in deep aquifers and can also enter drinking water through industrial discharges. In drinking water, chromium VI is very stable and soluble, whereas chromium III is not very soluble. Chromium VI is the more toxic form and is known to cause lung cancer in humans when inhaled, but the human health effects from ingestion are still a subject of conjecture.

There are no current drinking water standards for chromium VI. Total chromium (including chromium III and chromium VI) is regulated in California with an MCL of 50 µg/L. On August 20, 2009, the OEHHA released a draft PHG of 0.06 µg/L for chromium VI in drinking water. The PHG is a health-protective, non-regulatory level that will be used by CDPH in its development of an MCL. CDPH will set the eventual MCL as close to the PHG as technically and economically feasible.

Metropolitan monitors chromium levels in their source and treated waters and has found all samples to be below the State's 1 µg/L detection level for purposes of reporting, with the exception of the influent to the Mills Water Treatment Plant. Metropolitan's 2010 Regional Urban Water Management Plan reports the following findings with respect to chromium VI levels found in their source and treated waters:

- Colorado River chromium VI levels over the past 10 years were mostly not detected (<0.03 µg/L) but when detected, ranged from 0.03 – 0.08 µg/L.
- SWP chromium VI levels over the past 10 years ranged from 0.03 – 0.8 µg/L.

- Treated water chromium VI levels over the past 10 years ranged from 0.03 – 0.7 µg/L.
- The slight increase in chromium VI levels in treated water (as compared with Colorado River water) is caused from the oxidation (chlorination and ozonation) of natural background chromium (total) to chromium VI.
- Chromium VI in Metropolitan’s groundwater pump-in storage programs in the Central Valley has ranged from non-detect (< 0.03 µg/L) to 9.1 µg/L with the average for the different programs ranging from 1.4 to 5.0 µg/L.
- Chromium VI has been detected in a groundwater aquifer on the site of a Pacific Gas and Electric (PG&E) gas compressor station located along the Colorado River near Topock, Arizona. However, monitoring results along the river, both upstream and downstream of the Topock site, have ranged from non-detect (<0.03 µg/L) to 0.06 µg/L.

### ***N-nitrosodimethylamine (NDMA)***

N-nitrosodimethylamine (NDMA) is part of a family of organic chemicals called nitrosamines. NDMA is a byproduct of the disinfection of some natural waters with chloramines, which are used at Metropolitan treatment plants as a secondary disinfectant. Both the USEPA and CDPH consider NDMA to be a probable human carcinogen. While CDPH has not yet established an MCL for NDMA, they did establish a 0.01 µg/L notification level in 1998. OEHHA also set a PHG for NDMA of 0.003 µg/L in 2006 and recommended that concentrations greater than 0.01 µg/L be included in a utility’s annual Consumer Confidence Report.

Metropolitan has monitored its source waters (at treatment plant influents) and treated waters on a quarterly basis since 1999. Test results for NDMA in Metropolitan’s system have ranged from non-detect (< 0.002 µg/L) to 0.014 µg/L.

Metropolitan is engaged in several projects, which will lead to a better understanding of the watershed sources and occurrence of NDMA precursors in their source waters. That information can then be used to develop treatment strategies aimed at minimizing NDMA formation in drinking water treatment plants and distribution systems. To date, special studies conducted by Metropolitan have shown the use of advanced oxidation processes can be effective in removing NDMA. Other treatment processes such as biological, membrane, and carbon adsorption, may also be effective, but have not yet been studied.

### ***Pharmaceuticals and Personal Care Products***

Pharmaceuticals and personal care products (PPCPs) are a growing concern to the water industry. Numerous studies have reported the occurrence of these emerging contaminants in treated wastewater and surface water, as well as in some finished drinking water in the United States and other countries. The sources of PPCPs in the aquatic environment can include treated wastewater, industrial discharges, agricultural run-off, and leaching from municipal landfills. There is no current evidence of human

health risks from long-term exposure to the low concentrations (low ng/L; parts per trillion) of PCPs found in some drinking water. There are also no current regulatory requirements for PPCPs in drinking water.

In 2007, Metropolitan implemented a monitoring program to measure the occurrence of PPCPs and other organic wastewater contaminants in its treatment plant effluents and at selected source water locations within the Colorado River and SWP watersheds. Some PPCPs were detected at very low ng/L levels, which is consistent with reports from other utilities. Metropolitan will continue to refine their analytical methods, which will lead to a better understanding of these occurrence issues and their impact on drinking water sources in California.

### ***Methyl Tertiary Butyl Ether (MTBE) – A Decreasing Concern***

Although no longer a major concern, Methyl tertiary-butyl ether (MTBE) is still somewhat of a concern. MTBE was the primary oxygenate in virtually all the gasoline used in California, prior to discovering it contaminated groundwater supplies and had also been found in surface water supplies. Following that discovery, MTBE was banned in California as of December 31, 2003 and was subsequently replaced by ethanol which is now the primary oxygenate in use. CDPH has adopted a primary MCL of 13 µg/L for MTBE based on carcinogenicity studies in animals. MTBE has a California secondary MCL of 5 µg/L, which was established based on taste and odor concerns.

MTBE was introduced into surface water bodies from the motor exhausts of recreational watercraft. With that in mind, Metropolitan has taken steps at Diamond Valley Lake and Lake Skinner, to reduce the potential for MTBE contamination. In 2003, Metropolitan's Board banned the use of MTBE fuel in these reservoirs and authorized implementation of a monitoring program to detect the presence of MTBE in the lakes. In recent years, MTBE monitoring test results in source waters have remained at non-detectable levels (below 3 µg/L).

MTBE still presents a significant problem to local groundwater basins. Leaking underground storage tanks and previous poor fuel handling practices at local gas stations may continue to provide a large source of MTBE. MTBE, which is very soluble in water and has low affinity for soil particles, moves quickly into the groundwater. Some local groundwater producers within Metropolitan's service area have been forced to abandon some wells due to MTBE contamination. Unfortunately, MTBE is also resistant to chemical and microbial degradation in water, thereby making treatment more difficult than that employed to remove other gasoline components. However, a combination of an advanced oxidation process (typically ozone and hydrogen peroxide) followed by granular activated carbon has been found to be effective in reducing the levels of these contaminants.

Although some groundwater supplies remain contaminated with this highly soluble chemical, contamination of Metropolitan's surface water supplies are no longer a problem. Improved underground storage tank requirements and monitoring procedures,

as well as the phase-out of MTBE as a fuel additive, has decreased the likelihood of MTBE groundwater problems in the future.

### ***Imported Water Quality Programs***

Metropolitan supports and is involved in many programs that address water quality concerns related to both the SWP and Colorado River supplies. Some of the programs and activities include:

- Source Water Protection – Protecting the source of water supplies is of paramount importance to providing safe and reliable drinking water. CDPH requires large utilities delivering surface water to complete a Watershed Sanitary Survey every five years in accordance with California’s Surface Water Treatment Rule, Title 22 of the California Code of Regulations. The purpose of this survey is to identify possible sources of drinking water contamination, evaluate source and treated water quality, and recommend watershed management activities to protect and improve source water quality. The most recent sanitary surveys for Metropolitan’s water sources were completed in 2005 and 2006<sup>13</sup>. The next Sanitary Surveys for the watersheds of the Colorado River and the SWP will report on water quality issues and monitoring data through 2010. Metropolitan has an active source water protection program and continues to advocate on behalf of numerous SWP and Colorado River water quality protection issues.
- Support of SWP Water Quality Programs – Metropolitan continues to support DWR policies and programs aimed at maintaining or improving the quality of SWP water delivered to Metropolitan. Some examples of this support include:
  - Support of the DWR policy to govern the quality of non-project water conveyed by the California Aqueduct.
  - Support of the expansion of DWR’s Municipal Water Quality Investigations Program beyond its Bay-Delta core water quality monitoring and studies to include enhanced water quality monitoring and forecasting of the Delta and SWP. These programs are designed to provide early warning of water quality changes that will affect treatment plant operations both in the short-term (hours to weeks) and seasonally.
- Water Quality Exchanges – Metropolitan has implemented selective withdrawals from the Arvin-Edison storage program and exchanges with the Kern Water Bank to improve water quality. Although these programs were initially designed to provide dry-year supply reliability, they can also be used to store SWP water during periods of good water quality and then allow for their withdrawal during times of lesser water quality, thus providing better overall water quality through dilution of SWP water deliveries.

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<sup>13</sup> Sanitary Surveys include Metropolitan’s *Colorado River Watershed Sanitary Survey, 2005 Update* and State Water Project Contractors Authority *California State Water Project Watershed Sanitary Survey, 2006 Update*.

- Water Supply Security – In 2001, Metropolitan added new security measures to protect its water supply storage and conveyance facilities and continues to upgrade and refine those procedures. Changes have included an increase in the number of water quality tests conducted each year (Metropolitan now conducts over 300,000 analytical tests on samples collected within their service area and source waters), as well as contingency plans that coordinate with the Homeland Security Office’s multicolored tiered risk alert system.

### 3.1.3 Groundwater

Groundwater has been used in Ventura County for many years, for agricultural irrigation, and for municipal and industrial water supply. Historically, the aquifer system in southern Ventura County has been in a state of overdraft, primarily in the Lower Aquifer System (LAS), which has led to seawater intrusion. The non-consumptive portion of imported water used by the majority of Calleguas purveyor customers is treated at local wastewater treatment facilities and discharged to the Calleguas Creek watershed. This water ultimately percolates into the Upper Aquifer System (UAS), increasing groundwater levels in the region. Unfortunately, water in the UAS can have elevated levels of chlorides and TDS. As described in more detail in later sections, Calleguas, Ventura County Waterworks District No. 1 and other Calleguas member agencies are active participants in regional efforts to put some of this water to beneficial use by advancing groundwater desalter projects for groundwater recovery.

Table 3.1-1 summarizes groundwater quality in the basins that underlie Calleguas’ service area. The East Las Posas Basin supplies all the local groundwater for the Ventura County Waterworks District No. 1. Groundwater in Calleguas’ service area is generally high in TDS and occasionally high in nitrate concentrations. It is important to note that water quality within the basins can vary based on the location of the sample well, conditions of the sample well, and groundwater conditions on the day the sample was taken.

**Table 3.1-1  
Groundwater Basin Water Quality Summary**

Groundwater Basin	Average/Maximum TDS Level (mg/L)	Maximum Nitrate Level (mg/L)
Arroyo Santa Rosa	817 / 1,385	286
South Las Posas	709 / 2,318	144
North (East/West) Las Posas	752 / 2,135	186
Pleasant Valley	1,110 / 3,490	192
Oxnard Forebay	N/A / 2,460	222
Oxnard Plain	N/A / 3,535	226

Source: FCGMA website

N/A – Information not available

Data not available for Simi Valley and Conejo Valley

Seawater intrusion has long been a concern and was the issue that precipitated the creation of the FCGMA. The intrusion occurs exclusively along the coastline in the Oxnard Plain Basin. Elevated salts concentrations have also been observed in some portions of the Pleasant Valley Basin and appear to be related to marine sediments, oil field brines, and other geologic sources.

Chloride has also become a problem in the East and South Las Posas Basins and groundwater from these basins must be blended with lower-chloride water to be suitable for irrigation. This problem appears to have migrated downstream, with some of the City of Camarillo's wells now affected (FCGMA, 2007 Update to the FCGMA Groundwater Management Plan, 2007).

A high nitrate concentration in the groundwater is a problem localized in the Oxnard Plain and Forebay Basins. Potable water wells in the impacted areas are often affected during and following dry periods. The primary sources of nitrate are septic systems and agricultural fertilizer. To address the problem, septic systems are now prohibited in the Oxnard Plain Forebay and best management practices (BMPs) are being implemented to limit agricultural contributions.

### ***Groundwater Quality Improvement Projects***

VCWWD No. 1 has prepared a Preliminary Design Report for the Moorpark Desalter project that would improve water quality in the South Las Posas Groundwater Basin as well as reduce its dependency on imported water by pumping groundwater from the South Las Posas Basin with high TDS and chlorides to provide suitable potable or even irrigation water supply.

There has been a significant change in average groundwater levels over the past 40 years in the South Las Posas Basin, with groundwater levels rising more than 100 feet during this period. The mechanism for this rise in groundwater elevations is the increased recharge from percolation beneath the Arroyo Las Posas as discharges from the Moorpark and Simi Valley wastewater treatment plants and dewatering wells in Simi Valley have increased year-round flow in the arroyo. The entire alluvial aquifer near the arroyo has progressively filled to the elevation of the arroyo, starting in the easternmost portion of the basin in the 1960s and moving westward through the 1990s (Bachman, 2002). Water from the filled alluvial aquifer has percolated downward into the underlying LAS, creating a recharge mound in the LAS that extends from the arroyo northward into the East Las Posas Basin.

Salts in the groundwater have increased in the South Las Posas Basin and the southwestern portion of the East Las Posas Basin as the shallow aquifer filled along Arroyo Las Posas. These salts apparently were leached from the shallow aquifer as groundwater levels reached record highs, saturating sediments that have been unsaturated for the historic period. These salts apparently migrated vertically with percolating groundwater into the LAS and then laterally into the main portion of the East Las Posas

Basin as the recharge mound developed. Some of this groundwater is even unsuitable for irrigation without being blended with better-quality water.

The Moorpark Desalter would be a 5 million gallon per day (mgd) brackish groundwater treatment facility. The desalter would be located outside the City of Moorpark and within the District service area. Reverse osmosis (RO) treatment technology would be used to produce potable quality water. Brine waste, containing concentrated salts from the RO process, would be discharged to the Calleguas Salinity Management Pipeline and exported out of the Calleguas Creek Watershed to the Pacific Ocean.

As 5,000 AFY of high TDS water is removed from the Basin, space would be created for better-quality stormwater infiltration to percolate into the aquifer; the majority of these flows now bypass the recharge areas because the shallow South Las Posas aquifer is full.

### **3.2 WATER QUALITY EFFECT ON WATER MANAGEMENT STRATEGIES AND SUPPLY RELIABILITY**

The previous section summarized the general water quality issues of Metropolitan's imported water and overall groundwater supplies within the FCGMA area. The same water quality concerns apply to the District's water. The District's groundwater sources would be the most vulnerable to possible contamination from agricultural operations due to their use of pesticides and fertilizers. The District has iron and manganese quality issues and has installed treatment facilities at Well #15 and Well #20 and continues to monitor its groundwater wells for the first indication of problems as part of their water management strategy.

The District has not experienced any significant water quality problems in recent years and does not anticipate any significant changes in its available water supply due to water quality issues in the future due in large part to the mitigation actions undertaken by Metropolitan, Calleguas, and FCGMA as described earlier.



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## **4 WATER RELIABILITY PLANNING**

### **4.1 RELIABILITY OF WATER SUPPLIES**

This section provides a description of the efforts of Metropolitan, Calleguas and the District in securing an adequate and reliable regional water supply. This section also includes further discussion of these agencies and their roles in water supply reliability, and the near and long-term efforts they are involved with to ensure future reliability of water supplies to the District and the region as a whole.

The Southern California region faces a challenge in satisfying demands and securing firm water supplies. Increased environmental regulations and the competition for water from outside the region have resulted in reduced supplies of imported water. Continued population and economic growth generally leads to increased regional water demands, which results in larger demands on local supplies.

Reliability is a measure of a water system's expected success in managing water shortages. Good reliability planning requires accurate answers to the following questions:

1. What are the expected frequency and severity of shortages?
2. How will additional water management measures likely affect the frequency and severity of shortages?
3. How will available contingency measures reduce the impact of shortages when they occur?

The reliability of the District's water supply is currently dependent on the reliability of both the groundwater managed by the FCGMA and the imported water supplies managed by Metropolitan and delivered by Calleguas. Despite the ongoing regional water supply challenges, the goals and statutory mission of these agencies are to identify and develop projects to meet regional water demands.

State funding has been made available, through California voters' approval, to increase reliability of state water supplies. In March 2000, California voters approved Proposition 13, which authorized the State to issue \$1.97 billion of its general obligation bonds for water projects. Additionally, California voters approved Proposition 50 in November 2002 and Proposition 84 in November 2006, which authorized the issuance by the State of \$3.4 billion and \$5.4 billion, respectively, of general obligation bonds for water projects. Types of water projects eligible for funding under Propositions 13, 50, and 84 include water conservation, groundwater storage, water treatment, water quality, water security and Colorado River water management projects.

#### **4.1.1 Regional Agencies and Water Reliability**

##### ***Metropolitan Water District of Southern California (Metropolitan)***

Metropolitan was formed in the late 1920's with the primary goal of providing reliable water supplies to meet the water needs of its service area at the lowest possible cost. Collectively, charter members recognized the limited water supplies available within the region, and realized that continued prosperity and economic development of Southern California depended upon the acquisition and careful management of an adequate supplemental water supply. This foresight made the continued development of Southern California possible.

Metropolitan acquires water from Northern California via the State Water Project (SWP) and from the Colorado River via the Colorado River Aqueduct (CRA) to supply water to most of Southern California. As a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies. One such member agency is the Calleguas Municipal Water District, of which the District is a member agency.

Through a series of Integrated Resources Plans initiated in 1996 and most recently updated in 2010, Metropolitan has worked toward identifying and developing water supplies to provide 100 percent reliability. Due to competing needs and uses for all of the water sources and regional water operational issues, Metropolitan undertook a number of planning processes: the Integrated Resources Planning (IRP) Process, the Water Surplus and Drought Management (WSDM) Plan, the Strategic Planning Process, the Report on Metropolitan Water Supplies: A Blueprint for Water Reliability, and most recently, the October 2010 IRP update and the November 2010 Regional Urban Water Management Plan. Combined, these documents provide a framework and guidelines for optimum future water planning.

The reliability and operational issues related to Metropolitan's various sources of supply are discussed in detail by major source in the subsequent subsections of this Urban Water Management Plan. Metropolitan provides imported water supplies to the District through the District's Metropolitan member agency, Calleguas. Metropolitan is the wholesale water agency that serves supplemental imported water from northern California through the State Water Project (SWP) and the Colorado River to 26 member agencies located in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties, of which Calleguas is one.

The construction of the SWP was authorized by the State Legislature in 1951. Eight years later, the Legislature passed the Burns-Porter Act, which provided a mechanism for bonds to be issued to pay for the construction of certain portions of the SWP facilities. The California Department of Water Resources (DWR) has entered into contracts with water districts and regional agencies (SWP Contractors) specifying the amount of SWP water to be delivered to each SWP Contractor. Each SWP Contractor was provided with a contract amount and capacity rights to the SWP aqueduct and storage system in return

for payments intended to cover operation and maintenance, bondholder obligations, and repayment of moneys loaned from the California Water Fund. DWR water supply contracts contemplate SWP eventual delivery of 4.2 million AFY to 29 SWP Contractors. Although the SWP is not fully constructed and cannot yet deliver the full 4.2 million AFY in all years, the SWP has fully met SWP Contractors' water needs twelve out of the 17 years following the end of a six year drought in 1992. The dry years include 1994, 2001, and 2007 through 2009. Of SWP water deliveries, about 70 percent is delivered to SWP urban contractors and about 30 percent is delivered to SWP agricultural contractors. Kern County Water Agency and Metropolitan are the largest Contractors with DWR for SWP water.<sup>14</sup>

From a statewide perspective, the maximum capacity of the overall SWP transportation system is generally limited by the capacity of the system pumps. The capacity of the California Aqueduct is 10,300 cubic feet per second (cfs) at its northern end, and 4,480 cfs below the Edmonston pumping plant (1,000 cfs equates to approximately 82.6 acre-feet per hour, 1,983 acre-feet per day and 724,000 AFY). If these transportation rates were maintained for a full year, they would result in the transport of approximately 7.2 million acre-feet near the Delta and 3.2 million acre-feet to users in Southern California.<sup>15</sup>

Demand can have a significant effect upon the reliability of a water system. For example, if the demand occurs only three months in the summer, a water system with a sufficient annual supply but insufficient water storage may not be able to reliably meet the demand. If, however, the same amount of demand is distributed over the year, the system could more easily meet the demand because the need for water storage is reduced. Because the District overlies the Las Posas Basin and can utilize the Basin to smooth out seasonal peaks, its imported water reliability is enhanced.

Metropolitan's SWP imported water is stored at Castaic Lake on the western side of their service area and at Silverwood Lake near San Bernardino. Metropolitan water imported from the Colorado River via the CRA is stored at Diamond Valley Lake and Lake Mathews in Riverside County.

Metropolitan member agencies receive imported water at various delivery points along their system, and pay for it at tiered and/or uniform rates established by the Board, depending on the class of service. Metropolitan has recently increased its ability to supply water, particularly in dry years, through implementation of storage and transfer programs. Metropolitan's 26 member agencies deliver to their customers a combination of groundwater, local surface water, recycled water and imported water purchased from Metropolitan. For some member agencies, Metropolitan supplies all the water used within their service area, while others obtain varying amounts of water from Metropolitan

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<sup>14</sup> See, generally DWR Bulletin No. 132-06 and latter supplements to Bulletin No. 13; report available at this link: <http://www.water.ca.gov/swpao/bulletin.cfm>.

<sup>15</sup> DWR, Bulletin No. 132-05, December 2006; report available at this link: <http://www.water.ca.gov/swpao/bulletin.cfm>

to supplement local supplies. Metropolitan has provided between 45 and 60 percent of the municipal, industrial and agricultural water used in its service area.<sup>16</sup>

Historical water demands in the Metropolitan service area increased from 3.14 million acre feet (MAF) in 1980 to 3.93 MAF in 1990. Total retail water demand is projected to grow from its current 4.03 MAF in 2010 to a projected 4.27 MAF in 2035.<sup>17</sup> For Ventura County, according to Metropolitan, demands are projected to increase approximately 9.0 percent between 2010 and 2035.<sup>18</sup> Table 4.1-1 shows the historic and projected total retail water demands for Metropolitan's Ventura County service area. The water demand forecasts account for water savings resulting from plumbing codes, price effects, and actual and projected implementation of water conservation Best Management Practices as mandated by Senate Bill x7-7.<sup>19</sup>

**Table 4.1-1**  
**Total Retail Water Demand in Metropolitan's Service Area for Ventura County (Includes Municipal and Industrial, and Agriculture in AF)**

Actual			Interpolated	Projected				
1995	2000	2005	2010	2015	2020	2025	2030	2035
108,000	132,000	158,000	166,000	170,000	170,000	174,000	178,000	181,000

Source: November 2010 Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, Table A.1-5

### ***Colorado River Aqueduct (CRA)***

The Colorado River was Metropolitan's original source of water after the agency's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the U.S. Secretary of the Interior. Water from the Colorado River or its tributaries is also available to other users in California, as well as to users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has an allotment of 1.5 million acre-feet of Colorado River water annually, except in the event of extraordinary drought or serious accident to the delivery system in the United States, when the water allotted to Mexico can be curtailed. Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

<sup>16</sup> Metropolitan Water District of Southern California, Urban Water Management Plan, November 2010, page 1-6; Plan can be accessed at this link:

[http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP\\_2010.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf)

<sup>17</sup> Ibid., Table A.1-5

<sup>18</sup> Ibid., Table A.1-5

<sup>19</sup> Ibid., Table A.1-5

The Colorado River Aqueduct, which is owned and operated by Metropolitan, transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. After deducting for conveyance losses and considering maintenance requirements, up to 1.2 million acre-feet of water a year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below.

California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona and Nevada when such supplies have been requested for use in California. Under the 1931 priority system that has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment of 4.4 million acre-feet. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment.

Until 2002, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and apportioned but unused water. However, Arizona and Nevada increased their use of water from the Colorado River, leaving no unused apportionment available for California since the late 1990s. In addition, a severe drought in the Colorado River Basin has reduced storage in system reservoirs, resulting in no surplus water being available since 2002. Prior to 2002, Metropolitan could divert over 1.2 million acre-feet in any year, but since that time, Metropolitan's deliveries of Colorado River water varied from a low of 535,000 acre-feet in 2006 to a projected high of 1,150,000 acre-feet in 2010<sup>20</sup>.

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water. Under a 1988 water conservation agreement (the "1988 Conservation Agreement") between Metropolitan and the Imperial Irrigation District (IID), IID has constructed and is operating a number of conservation projects that are currently conserving 105,000 acre-feet of water per year. In 2007, the conserved water augmented the amount of water available to Metropolitan by 85,000 acre-feet and, by prior agreement, to the Coachella Valley Water District (CVWD) by 20,000 acre-feet.<sup>21</sup>

In 1992, Metropolitan entered into an agreement with the Central Arizona Water Conservation District (CAWCD) to demonstrate the feasibility of CAWCD storing Colorado River water in central Arizona for the benefit of an entity outside of the State of Arizona. Pursuant to this agreement, CAWCD created 80,909 acre-feet of long-term storage credits that may be recovered by CAWCD for Metropolitan. Metropolitan, the Arizona Water Banking Authority, and CAWCD executed an amended agreement for

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<sup>20</sup> Ibid., Table A.2-1

<sup>21</sup> Ibid, Page A.3-4

recovery of these storage credits in December 2007. In 2007, 16,804 acre-feet were recovered. Metropolitan requested 25,000 acre-feet be recovered in 2008, and expects to request the balance of the storage credits over the next several years. Water recovered by CAWCD under the terms of the 1992 agreement allows CAWCD to reduce its use of Colorado River water, resulting in Arizona having an unused apportionment. The Secretary of the Interior is making this unused apportionment available to Metropolitan under its Colorado River water delivery contract.

In April 2008, Metropolitan's Board authorized the expenditure of \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (SNWA) in funding the construction of a new 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County. The Drop 2 Reservoir is expected to save up to 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost. In return for its funding, Metropolitan received 100,000 acre-feet of water that is stored in Lake Mead until recovered, with annual delivery of up to 34,000 acre-feet of water through 2010 and up to 25,000 acre-feet between 2011 and 2036. Besides the additional water supply, the new reservoir will add to the flexibility of Colorado River operations.

Metropolitan and the Palo Verde Irrigation District (PVID) signed the program agreement for a Land Management, Crop Rotation and Water Supply Program in August 2004. This program provides up to 118,000 acre-feet of water available to Metropolitan in certain years. The term of the program is 35 years. Following of approximately 20,000 acres of land began on January 1, 2005. In 2005, 2006, 2007, 2008 and 2009 approximately 108,700, 105,500, 72,300, 94,300 and 102,200 acre-feet, respectively, of water were saved through these programs.<sup>22</sup>

With Arizona's and Nevada's increasing use of their respective apportionments and the uncertainty of continued Colorado River surpluses, in 1997 the Colorado River Board of California, in consultation with Metropolitan, IID, PVID, CVWD, the Los Angeles Department of Water and Power and the San Diego County Water Authority (SDCWA), embarked on the development of a plan for reducing California's use of Colorado River water to its basic apportionment of 4.4 million acre-feet when use of that basic allotment is necessary (California Plan). In 1999, IID, CVWD, Metropolitan and the State of California agreed to a set of Key Terms aimed at managing California's Colorado River supply. These Key Terms were incorporated into the Colorado River Board's May 2000 California Plan that proposed to optimize the use of the available Colorado River supply through water conservation, transfers from higher priority agricultural users to Metropolitan's service area and storage programs.

To implement these plans, a number of agreements have been executed. One such agreement, the Quantification Settlement Agreement (QSA), is a landmark agreement signed by the four California Colorado River water use agencies and the U.S. Secretary of the Interior, which will guide reasonable and fair use of the Colorado River by

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<sup>22</sup> Ibid, page A.3-7

California through the year 2037. The QSA was authorized in October 2003 and defined Colorado River water deliveries to the four California agencies as well as facilitated transfers from agricultural agencies to urban users. The QSA is a critical component of California's Colorado River Water Use Plan.

### **State Water Project (SWP)**

The SWP is owned and operated by the California Department of Water Resources. The reliability of the SWP impacts Metropolitan's member agencies' ability to plan for future growth and supply. On an annual basis, each of the 29 SWP contractors, including Metropolitan, request an amount of SWP water based on their anticipated yearly demand. In most cases, Metropolitan's requested supply is equivalent to its full Table A Amount,<sup>23</sup> currently at 1,911,500 AFY, and in certain wetter years additional supply may be made available. The full Table A amount is defined as the maximum amount of imported water to be delivered and is specified in the contract between the DWR and the contractor. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements. Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A Amount, but instead, are allocated a percentage of that amount based on the available supply. Table 4-1-2 lists the historical SWP deliveries to Metropolitan and the delivery's percentage compared to the full Table A amount. Once the percentage is set early in the water year, the agency can count on that amount of supply or more in the coming year. The percentage is typically set conservatively and is then held or adjusted upwards later in the year based on a reassessment of precipitation and snow pack.

Litigation filed by several environmental interest groups (NRDC v. Kempthorne (Case No. 05CV01207-OWW-GSA); Pacific Coast Federation of Fishermen's Associations v. Gutierrez (Case No. 06CV00245-OWW)) has alleged that certain biological opinions and incidental take permits granted by state and federal agencies for water permits in the Sacramento-San Joaquin Bay Delta inadequately analyzed impacts on species listed as endangered under the Federal Endangered Species Act (ESA). In 2007, Federal District Judge Wanger issued a decision, finding the United States Fish and Wildlife Service's biological opinion for Delta smelt to be invalid. Judge Wanger issued an Interim Remedial Order and Findings of Fact and Conclusions of Law requiring that the SWP and Central Valley Project (CVP) operate according to certain specified criteria until a

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<sup>23</sup> Two types of deliveries are assumed for the SWP contractors: Table A and Article 21. Table A Amount is the contractual amount of allocated SWP supply, set by percentage amount annually by DWR; it is scheduled and uninterruptible. Article 21 water refers to the SWP contract provision defining this supply as water that may be made available by DWR when excess flows area available in the Delta (i.e., Delta outflow requirements have been met, SWP storage south of the Delta is full, and conveyance capacity is available beyond that being used for SWP operations and delivery of allocated and scheduled Table A supplies). Article 21 water is made available on an unscheduled and interruptible basis and is typically available only in average to wet years, generally only for a limited time in the later winter.



new biological opinion for the Delta smelt was issued by the United States Fish and Wildlife Service.

**Table 4.1-2**  
**SWP Deliveries to Metropolitan (AF)<sup>24</sup>**

Year	SWP Delivery	% of Full Table A
1981	826,951	43%
1982	856,996	45%
1983	385,308	20%
1984	501,682	26%
1985	740,410	39%
1986	756,142	40%
1987	769,603	40%
1988	957,276	50%
1989	1,215,139	64%
1990	1,457,676	76%
1991	624,861	33%
1992	746,991	39%
1993	663,390	35%
1994	845,305	44%
1995	451,305	24%
1996	642,871	34%
1997	724,393	38%
1998	521,255	27%
1999	790,538	41%
2000	1,442,615	75%
2001	1,119,408	59%
2002	1,413,745	74%
2003	1,560,569	82%
2004	1,792,246	94%
2005	1,720,350	90%
2006	1,911,500	100%
2007	1,146,900	60%
2008	669,025	35%
2009	764,600	40%
2010	955,750	50%
2011	1,529,200	80%

<sup>24</sup> Table A data extracted from DWR Website; 2011 data represents the initial allocation of 25% plus the subsequent notices to SWP Contractors in December 2010, January, and April, 2011 increasing the allocation to 50%, 60% and 80%, respectively. Metropolitan's full Table A amount is 1,911,500 AFY

DWR bi-annually prepares a report on the current and future for SWP water supply conditions, if no significant improvements are made to convey water past the Sacramento-San Joaquin Delta (Delta) or to store the more variable run-off expected with climate change. The latest 2009 State Water Project Delivery Reliability Report (2009 Report) is the most current of these reports dated August 2010.

The 2009 Report shows a continuing erosion of the ability of the SWP to deliver water. For current conditions, the dominant factor for these reductions is the restrictive operational requirements contained in the federal biological opinions. For future conditions, it is these requirements and the forecasted effects of climate change.

Deliveries estimated for the 2009 Report are reduced by the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and CVP operations. To illustrate the effect of these operational restrictions, the median value estimated for the primary component of SWP Table A deliveries for Current Conditions in the 2005 Report is 3,170 thousand acre feet (TAF); in the 2007 Report is 2,980 TAF; and in the 2009 Report is 2,680 TAF; for a reduction of almost 500 TAF. For the 2009 studies, the changes in run-off patterns and amounts are included along with a potential rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the Delta in order to meet water quality objectives established for the Delta. The effect of the operational restrictions in addition to the incorporation of potential climate change impacts amounts to an estimated reduction of 970 TAF when the median value for annual SWP deliveries for Future Conditions in the 2005 Report (3,750 TAF) is compared to the updated value in the 2009 Report (2,600 TAF). DWR has altered operations of the SWP to accommodate species of fish listed under the Federal and California Endangered Species Acts (ESAs). These changes in project operations have influenced the manner in which water is diverted from the Bay-Delta and SWP deliveries to the southern part of the State. Restrictions on Bay-Delta pumping beginning in 2008 under the Interim Remedial Order in *NRDC v. Kempthorne* have resulted in reduced deliveries of SWP water to Metropolitan.

Based on DWR estimates of SWP deliveries under the Interim Remedial Order, and assuming an equal division of curtailments between the SWP and CVP,<sup>25</sup> Metropolitan has met firm demands in calendar years 2008, 2009 and 2010. However, Metropolitan has been withdrawing supplies from surface and groundwater storage to meet current demands. Anticipating that storage could be significantly reduced by the end of 2010, Metropolitan and its member agencies are calling for voluntary water conservation to lower demands and reduce drawdown from water storage. In fact on April 14, 2009, Metropolitan adopted a Level 2 Allocation, which equates to a 10 percent reduction in

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<sup>25</sup> Assuming an equal division of curtailments between the SWP and the CVP is conservative and may have the effect of overstating the amount of SWP curtailment. As an example, in January 2009, the U.S. Bureau of Reclamation, which operates the CVP, provided notice to agricultural customers that it intended to not provide any water deliveries to agricultural customers in 2009. Thus, in the short term it appears as though agricultural users which receive water through the CVP may suffer deeper water cuts as compared to water purveyors which receive water from the SWP.

regional water supplies. Based on similar water supply conditions, this same level of allocation was adopted on April 13, 2010 for this current fiscal year by Metropolitan. If necessary, mandatory water allocations could be imposed in the future to cause further reductions in water use and reduce drawdown from water storage reserves. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and many of the retail suppliers in Metropolitan's service area have initiated conservation measures.

To create a systemic solution to the issues facing the Delta (which have existed since the 1970's), Governor Schwarzenegger created the Delta Vision process, which is aimed at identifying long-term solutions to the conflicts in the Bay-Delta, including natural resource, infrastructure, land use and governance issues. The Delta Vision Blue Ribbon Task Force presented findings and recommendations for a sustainable Delta as a healthy ecosystem and water supply source on January 17, 2008. In addition, state and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay-Delta Conservation Plan (BDCP), which is aimed at addressing ecosystem needs and securing long-term operating permits for the SWP. On November 18, 2010 the BDCP Steering Committee released a Working Draft of all Plan components completed to date. A public draft BDCP is expected to be completed and available for public review in 2011. Following a public review period, a final BDCP is expected before the end of 2012. Recently, statewide officials have expressed support for the construction of the peripheral canal, which would alleviate some of the delta species considerations by transferring river water south before it reaches the Bay Delta.

The issues, such as the recent decline of some fish species in the Delta and surrounding regions and certain operational actions in the Delta, may impact Metropolitan's water supply from the Delta. SWP operational requirements may be further modified through the consultation process for new biological opinions for listed species under the Federal ESA or from the California Department of Fish and Game's actions regarding the California ESA. Decisions in current or future litigation, listings of additional species (such as the longfin smelt), or new regulatory requirements could adversely affect SWP operations in the future by requiring additional export reductions, releases of additional water from storage, or other operational changes impacting water supply operations.

### ***Water Transfer and Exchange Programs***

California's agricultural activities consume approximately 34 million acre-feet of water annually, which is 80 percent of the total water used for agricultural and urban uses and 40 percent of the water used for all consumptive uses. Voluntary water transfers and exchanges can make a portion of this agricultural water supply available to support the State's urban areas. Such existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board of Directors. Metropolitan is currently pursuing voluntary water transfer and exchange programs with state, federal, public and private water districts and individuals. The

following information on these programs has been extracted from Metropolitan's 2010 Regional UWMP:

- *Semitropic Storage Program:* Metropolitan has a groundwater storage program with Semitropic Water Storage District located in the southern part of the San Joaquin Valley. The maximum storage capacity of the program is 350 TAF. The specific amount of water Metropolitan can store in and subsequently expect to receive from the programs depends upon hydrologic conditions, any regulatory requirements restricting Metropolitan's ability to export water for storage, and the demands placed on the Semitropic Program by other program participants. During the recent dry year of 2008, the storage program delivered 125 TAF to Metropolitan. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP entitlement water that are in excess of the amounts needed to meet Metropolitan's service area demand. In Semitropic, the water is delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the districts return Metropolitan's previously stored water to Metropolitan by direct groundwater pump-in return and the exchange of State Water Project entitlement water.
- *Arvin-Edison Storage Program:* Metropolitan amended the groundwater storage program with Arvin-Edison Water Storage District in 2008 to include the South Canal Improvement Project. The project increases the reliability of Arvin-Edison returning higher water quality to the California Aqueduct. The program storage capacity is 350 TAF. The specific amount of water Metropolitan can expect to store in and subsequently receive from the programs depends upon hydrologic conditions and any regulatory requirements restricting Metropolitan's ability to export water for storage. The storage program is estimated to deliver 75 TAF. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP Table A supplies which are in excess of the amounts needed to meet Metropolitan's service area demand. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.
- *San Bernardino Valley MWD Storage Program:* The San Bernardino Valley MWD Storage program allows for the purchase of a portion of San Bernardino Valley Municipal Water District's State Water Project supply. The program includes a minimum purchase provision of 20 TAF and the option of purchasing additional supplies when available. This program can deliver between 20 TAF and 70 TAF in dry years, depending on hydrologic conditions. The expected delivery for a single dry year similar to 1977 is 70 TAF. The agreement with San Bernardino Valley MWD also allows Metropolitan to store up to 50 TAF of transfer water for use in dry years.
- *Kern-Delta Water District Storage Program:* This groundwater storage program has 250 TAF of storage capacity. When fully developed, it will be capable of

providing 50 TAF of dry-year supply. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.

- *Mojave Storage Program*: Currently operated as a demonstration program, the program will store SWP supply delivered in wet years for subsequent withdrawal during dry years. When fully developed, the program is expected to have a dry-year yield of 35 TAF depending on hydrologic conditions.
- *Central Valley Transfer Programs*: Metropolitan expects to secure Central Valley water transfer supplies via spot markets and option contracts to meet its service area demands when necessary. Hydrologic and market conditions, and regulatory measures governing Delta pumping plant operations will determine the amount of water transfer activity occurring in any year. Transfer market activity in 2003, 2005, 2008, and 2009 provide examples of how Metropolitan has secured water transfer supplies as a resource to fill anticipated supply shortfalls needed to meet Metropolitan's service area demands.
  - In 2003, Metropolitan secured options to purchase approximately 145 TAF of water from willing sellers in the Sacramento Valley during the irrigation season. These options protected against potential shortages of up to 650 TAF within Metropolitan's service area that might have arisen from a decrease in Colorado River supply or as a result of drier than expected hydrologic conditions. Using these options, Metropolitan purchased approximately 125 TAF of water for delivery to the California Aqueduct.
  - In 2005, Metropolitan, in partnership with seven other State Water Contractors, secured options to purchase approximately 130 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was 113 TAF. Metropolitan also had the right to assume the options of the other State Water Contractors if they chose not to purchase the transfer water. Due to improved hydrologic conditions, Metropolitan and the other State Water Contractors did not exercise these options.
  - In 2008, Metropolitan in partnership with seven other State Water Contractors, secured approximately 40 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was approximately 27 TAF.
  - In 2009, Metropolitan in partnership with eight other buyers and 21 sellers participated in a statewide Drought Water Bank, which secured approximately 74 TAF, of which Metropolitan's share was approximately 37 TAF.

Metropolitan's recent water transfer activities have demonstrated its ability to develop and negotiate water transfer agreements either working directly with the agricultural districts who are selling the water or through a statewide Drought Water Bank. Because of the complexity of cross-Delta transfers and the need to

optimize the use of both CVP and SWP facilities, DWR and USBR are critical players in the water transfer process, especially when shortage conditions increase the general level of demand for transfers and amplify ecosystem and water quality issues associated with through-Delta conveyance of water. Therefore, Metropolitan views state and federal cooperation to facilitate voluntary, market-based exchanges and sales of water as a critical component of its overall water transfer strategy.

In addition to the previously mentioned programs, Metropolitan also manages or participates in the following existing SWP programs located outside of its service area:

- *Sacramento Valley Water Management Agreement (Phase 8 Settlement)*: Metropolitan is a signatory to the Sacramento Valley Water Management Agreement (Phase 8 Settlement) that includes work plans to develop and manage water resources to meet Sacramento Valley in-basin needs, environmental needs under the SWRCB's Water Quality Control Plan, and export supply needs for both water demands and water quality. The agreement specifies about 60 water supply and system improvement projects by 16 different entities in the Sacramento Valley.
- *Monterey Amendment*: Metropolitan was a signatory to the 1994 Monterey Amendment to resolve disputes between the urban and agricultural SWP contractors over how contract supplies are to be allocated in times of shortage by amending certain provisions of the long-term water supply contracts with DWR. The Monterey Amendment altered the water allocation procedures such that both shortages and surpluses would be shared in the same manner for all contractors, eliminating the prior "agriculture first" shortage provision. In turn, the agricultural contractors agreed to permanently transfer 130,000 AF to urban contractors and permanently retire 45,000 AF of their contracted supply.
- *SWP Terminal Storage*: Metropolitan has contractual rights to 65,000 AF of flexible storage at Lake Perris (East Branch terminal reservoir) and 153,940 AF of flexible storage at Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing SWP deliveries to maximize yield from the project.
- *Yuba Dry-year Water Purchase Program*: In December 2007, Metropolitan entered into an agreement with DWR providing for Metropolitan's participation in the Yuba Dry Year Water Purchase Program between Yuba County Water Agency and DWR through 2025.
- *Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer*: Under the transfer agreement, Metropolitan transferred 100,000 AF of its SWP Table A amount to DWCV effective January 1, 2005. DWCV pays all SWP charges for this water, including capital costs associated with capacity in the SWP to transport this water to Perris Reservoir as well as the associated variable costs. The amount of water actually delivered in any given year depends on that year's SWP allocation. Water is delivered through the existing exchange

agreements between Metropolitan and DWCV. While Metropolitan transferred 100,000 AF of its Table A amount, it retained other rights, including interruptible water service, its full carryover amounts in San Luis Reservoir, its full use of flexible storage in Castaic and Perris Reservoirs, and any rate-management credits associated with the 100,000 AF. In addition, Metropolitan is able to recall the SWP transfer water in years in which Metropolitan determines it needs the water to meet its water management goals. The main benefit of the agreement is to reduce Metropolitan's SWP fixed costs in wetter years when there are more than sufficient supplies to meet Metropolitan's water management goals, while at the same time preserving its dry-year SWP supply.

- *DWCV Advance Delivery Program:* Under this program, Metropolitan delivers Colorado River water to DWCV in advance of the exchange for their SWP Contract Table A allocations. By delivering enough water in advance to cover Metropolitan's exchange obligations, Metropolitan is able to receive DWCV's available SWP supplies in years in which Metropolitan's supplies are insufficient without having to deliver an equivalent amount of Colorado River water.
- *DWCV Other SWP Deliveries:* Since 2008, Metropolitan has provided DWCV's written consent to take delivery from the SWP facilities non-SWP supplies separately acquired by each agency. These deliveries include water acquired from the Yuba Dry Year Water Purchase Program and the 2009 Drought Water Bank.

### ***Supply Management Strategies***

On the regional level, Metropolitan has taken a number of actions to secure a reliable water source for its member agencies. Metropolitan recently adopted a water supply allocation plan for dealing with potential shortages that takes into consideration the impact on retail customers and the economy, changes and losses in local supplies, the investment in and development of local resources, and conservation achievements.<sup>26</sup> Additional actions taken by Metropolitan during the first half of 2008 include the adoption of a \$1.9 billion spending plan, increased rates and charges,<sup>27</sup> and the funding of a new reservoir to benefit Colorado River supply capabilities.<sup>28</sup> Metropolitan's approved budget for 2010/11 included rate increases of 7.5 percent with another 7.5 percent increase planned for 2011/12 to maintain this spending for the improvement of water conveyance facilities, water transfers, and providing financial assistance to member agency's local conservation, recycling, and groundwater clean-up efforts<sup>29</sup>.

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<sup>26</sup> Metropolitan Water District Press Release dated February 12, 2008.

<sup>27</sup> Metropolitan Water District Board Meeting, March 11, 2008, and Press Release of same date, regarding spending plan and adoption of rates and charges.

<sup>28</sup> Metropolitan Water District Board Meeting, April 8, 2008, and Press Release of same date, regarding new reservoir.

<sup>29</sup> Metropolitan Water District, Annual Budget, which can be accessed at this link:  
<http://www.mwdh2o.com/mwdh2o/pages/finance/budget/AB2011.pdf>

Metropolitan also supports a number of resource management actions and measures, which promote consistency in the available water supply during dry years. These actions and measures, segregated below by category, include:

#### Conservation

- Providing incentives to facilitate the installation of water conserving devices. Metropolitan is also looking at refining their current incentive program to include more options, streamlined administrative processes, and more standardization across programs to increase participation. Total incentive payments for FY 2006/07 were \$15.4 million and for FY 2007/08 were \$18.1 million, which created 8,300 AF and 7,400 AF of new conserved water savings, respectively, bringing the total to 120,000 AF of conserved annual water savings, since 1991.
- Promoting water savings through legislative measures.
- Pursuing specific implementation strategies outlined in Metropolitan's Conservation Strategy Plan, jointly developed with its member agencies.

#### Local Resources (LRP)

- Providing incentives of up to \$250 per acre-foot to expand water recycling and groundwater recovery programs. Eighty-six participating water recycling and groundwater recovery projects are expected to collectively produce about 363,000 AFY once fully implemented. Since inception of the LRP in 1982, Metropolitan has provided more than \$244 million for the production of about 1.3 MAF of recycled water and recovered groundwater.
- Encouraging development of seawater desalination by promoting improved regional facilitation and funding. Additional information on desalination is included later in this section.
- Updating policies to allow for an open process to accept and view project applications on a continuous basis, with a goal of development of an additional 174,000 acre-feet per year of local water resources.

#### In-Basin Groundwater Storage

- Promoting dry-year conjunctive use programs with member and retail agencies, which provide more than 415,000 AF of additional storage within Metropolitan's service area with a contractual yield of more than 115,000 AF during dry conditions. Metropolitan has allocated \$52.4 million to these programs to date. Metropolitan also has about 63,000 AF in local supplemental storage through agreements with several member agencies.

#### In-Basin Surface Water Storage

- Providing storage in Metropolitan's Diamond Valley, Lake Mathews and Lake Skinner Reservoirs.



- Providing flexible storage in DWR's Castaic Lake and Lake Perris Reservoirs.

### ***Calleguas Municipal Water District (Calleguas)***

Calleguas represents its members at a regional, state and federal level, and advocates for the development and protection of imported water supplies and planning along with coordinating the water needs for its service area. Calleguas' water management goals and objectives include working together with Ventura County water agencies, including the District, to focus on solutions and priorities for improving its member agencies' future water supply reliability.

Calleguas' staff also represents its member agencies' interests in such water planning efforts as Metropolitan's IRP and Water Surplus and Drought Management (WSDM) Plan, with a focus on Ventura County's water future, and other local water supply programs. Calleguas has focused its planning efforts on using existing supplies more efficiently and maximizing local water resources. Working cooperatively with local agencies, Calleguas supports a number of local recycling and groundwater recovery projects to offset increasing imported water demands.

### ***Fox Canyon Groundwater Management Agency (FCGMA)***

As previously noted, FCGMA was created by a special act of the California legislature in 1982 for the express purposes of regulating, conserving, managing, and controlling the use and extraction of groundwater to help preserve resources, and to counter seawater intrusion beneath the Oxnard Plain.<sup>30</sup>

Approximately 65 percent of the water used within the FCGMA boundary (shown previously in Figure 2-3) is typically obtained from local groundwater sources. 120,537 AF were withdrawn from FCGMA's seven major basins within its boundary in 2010. However, the Las Posas groundwater basin, which falls under the jurisdiction of FCGMA meets only an average of approximately 18 percent of the water supplied within the District's boundaries.

### ***FCGMA Groundwater Management Plan***

Following formation, FCGMA was required to develop a Groundwater Management Plan (GMP) to control extractions from the Oxnard and Magu aquifers within three years. In addition the agency was required to develop a plan to manage future groundwater extraction from the Lower Aquifer System (LAS). In 1985, the Agency completed its first GMP. By 2004, significant regional land use changes, the need for additional water supply, emerging water quality and quantity challenges, and developing stakeholder groundwater utilization projects caused the Agency to evaluate the need for an update to its original GMP. The goal of the GMP evaluation/update was to develop new groundwater strategies and to amend previously existing strategies with recent data and more rigorous groundwater flow model information to better assist the Agency in

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<sup>30</sup> FCGMA 2010 Annual Report

bringing the groundwater basins into balance by year 2010. In June 2005, the Board set aside funds for United Water Conservation District staff to revise the regional groundwater model and allotted time for Agency staff to work with UWCD, Calleguas, and the FCGMA stakeholders to develop a comprehensive document that incorporated the model results and the proposed strategies.

In June 2006, the first draft of the GMP was completed and presented for public review and comment. A completely revised and updated FCGMA GMP was formally adopted by the Board on May 23, 2007. (Appendix H)

The GMP identifies a series of short-term and long-term groundwater management projects and strategies designed to address the current imbalance between water supply and demand. Most activity involved ranking of strategies via a custom matrix process and discussion of costs and importance of such strategies.

During 2010, the focus was on getting the FCGMA stakeholders to implement some of the top priority or higher ranked management strategies. Feedback from these well operators revealed that financial help was the most important aspect needed to begin work on effective management ideas evaluated in the GMP. To facilitate funding assistance, the FCGMA began to formulate ideas that would help lead toward channeling penalty or surcharge funds collected by the Agency into viable projects built and run by the individual FCGMA stakeholders.

### ***Wastewater Service***

Wastewater service within the District's service area is also provided by the District. Sewage is collected and treated by the District at the Moorpark Wastewater Treatment Plant, which has an average day capacity of 5.0 million gallons a day (mgd). Current flows to the plant are averaging just over 2.21 mgd. Following treatment, most effluent is currently discharged to percolation ponds adjacent to the plant with around 450 AFY (0.4 mgd) currently being recycled and utilized for golf course irrigation. The District currently has tertiary treatment capacity of 1.5 mgd and by 2012, should complete distribution facilities to provide up to 1,100 AFY (1.0 mgd) of tertiary treated recycled water to serve the existing Moorpark County Club golf course and existing agricultural customers. By 2020, the District should have enough effluent and plans to expand the distribution system to add additional recycled water customers in this general vicinity bringing the annual total recycled water usage to 1,600 AFY.

### ***Regional Water Quality Control Board – Region 4***

#### ***Background***

The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB or Regional Board) are responsible for the protection and, where possible, the enhancement of the quality of California's waters. The SWRCB sets statewide policy, and together with the Regional Boards, implements state and

federal laws and regulations. Each of the nine Regional Boards adopts a Water Quality Control Plan or Basin Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems.

In 1975, the Los Angeles RWQCB (LARWQCB) adopted separate Water Quality Control Plans (Basin Plans) for the Los Angeles Region comprised of the Santa Clara and Los Angeles River Basin Plans. The two Basin Plans were amended in 1978, 1990, and 1991. On June 13, 1994, the LARWQCB adopted a single Basin Plan<sup>31</sup> covering both basins. For planning purposes, the single Basin Plan divides the region into major surface watersheds and groundwater basins, such as the Los Angeles River and San Gabriel River Watershed. The LARWQCB periodically updates the Basin Plan to address issues that evolve over time due to increasing population and changing water demands in the region.

The Basin Plan is more than a collection of water quality goals and policies, descriptions of conditions, and discussions of solutions. It is also the basis for the LARWQCB's regulatory programs. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. Water quality problems in the region are listed in the Basin Plan, along with the causes, if known. For water bodies with quality below the recommended levels necessary for beneficial uses, plans for improving water quality are included. Legal basis and authority for the LARWQCB reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code (Porter-Cologne Water Quality Control Act) and the Clean Water Act. The LARWQCB also regulates water discharges to minimize their effects on the region's ground and surface water quality. Permits are issued by the LARWQCB under a number of these programs and authorities.

### ***Key Regional Issues***

The District's service area is in the Calleguas Creek Watershed Management Area as identified in the Basin Plan, which is basically co-terminus with the FCGMA boundary. Water quality issues in this region have been previously discussed in the section under FCGMA and are being addressed by that agency.

### ***Water Resources and Water Quality Management***

Numerous water resource management studies and projects, focused on water quality and/or water supply, are in progress in the Region under the auspices of a variety of parties. Some of these activities bear directly on the implementation of the Basin Plan, while others may lead to future Basin Plan amendments to incorporate appropriate changes, such as revised regulatory strategies for various dischargers. These investigations and the implementation of appropriate physical solutions are an essential and integral part of the effort to restore and maintain water quality in the Region.

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<sup>31</sup> The LARWQCB Basin Plan can be accessed at this link:  
[http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/basin\\_plan/basin\\_plan\\_documentation.shtml](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/basin_plan/basin_plan_documentation.shtml)

## 4.2 REGIONAL DEMAND AND SUPPLIES COMPARISON

### ***Metropolitan Water District Supplies and Demands***

As previously noted, the Ventura County Waterworks District No. 1 obtains its imported water from Calleguas, its Metropolitan member agency. As a part of its Integrated Water Resources Plan Implementation Report process (IRP)<sup>32</sup>, and more recently in its November 2010 Regional Urban Water Management Plan (RUWMP), Metropolitan chose the year 1977 as the single driest year since 1922, and the years 1990-1992 as the driest multiple (3) years over that same period. These years were selected because they represent the timing of the least amount of available water resources from the SWP, a major source of Metropolitan's supply.

Concurrently with the preparation of its 2010 RUWMP, Metropolitan also prepared a 2010 IRP Update, which was adopted by the Metropolitan Board of Directors on October 12, 2010.

Based on Metropolitan's 2010 RUWMP and 2010 IRP, Tables 4.2-1 and 4.2-2 herein summarize Metropolitan's current imported supply availability and demand projections for average year, single dry year, and multiple dry years over the 20-year period beginning in 2015 and ending in 2035. The supply projections include current programs and programs under development as well as in-region storage and programs. Reference is made to Metropolitan's 2010 RUWMP for a description of these programs under development, but they include only programs Metropolitan is confident can be implemented and do not include other more speculative regional programs. Even if all the programs under development are removed, there are surpluses in all years and scenarios listed below. Demands are firm demands on Metropolitan and also include Metropolitan's commitments for IID-SDCWA transfers and canal lining.

Table 4.2-1, summarizing single dry year demand data shows surpluses in all years ranging from a low of 148.3 percent (projected supply during a single dry year as a percent of single dry year demand) in 2015 to a high of 182.3 percent in 2020. Similarly, Table 4.2-2 shows surpluses in all years ranging from a low of 118.6 percent (projected supply during an average year of a multiple (three) year dry period as a percent of average multiple year demand in 2015 to a high of 142.5 percent in 2025.

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<sup>32</sup> Metropolitan develops Integrated Water Resources Plans (IRPs), which lay out how Metropolitan will secure and provide water to its customer base. These IRPs utilize hydrological and other data provided by DWR and are updated periodically through IRP Report Updates to reflect changing conditions.

**Table 4.2-1**  
**Metropolitan's Regional Water Supply/Demand Reliability Projections (AFY)**  
**for Average and Single Dry Years**

Row	Region Wide Projections	2015	2020	2025	2030	2035
<b>Supply Information</b>						
A	Projected Supply During an Average Year <sup>[1]</sup>	4,073,000	4,499,000	5,140,000	4,998,000	4,865,000
B	Projected Supply During a Single Dry Year <sup>[1]</sup>	3,219,000	3,644,000	4,013,000	3,859,000	3,726,000
C = B/A	Projected Supply During a Single Dry Year as a % of Average Supply	<b>79.0</b>	<b>81.0</b>	<b>78.1</b>	<b>77.2</b>	<b>76.6</b>
<b>Demand Information</b>						
D	Projected Demand During an Average Year <sup>[2]</sup>	2,006,000	1,933,000	1,985,000	2,049,000	2,106,000
E	Projected Demand During a Single Dry Year <sup>[2]</sup>	2,171,000	2,162,000	2,201,000	2,254,000	2,319,000
F = E/D	Projected Demand During a Single Dry Year as a % of Average Demand	<b>108.2</b>	<b>111.8</b>	<b>110.9</b>	<b>110.0</b>	<b>110.1</b>
<b>Surplus Information</b>						
G = A-D	Potential Surplus During an Average Year	2,067,000	2,566,000	3,155,000	2,949,000	2,759,000
H = B-E	Potential Surplus During a Single Dry Year	1,048,000	1,482,000	1,812,000	1,605,000	1,407,000
<b>Additional Supply Information</b>						
I = A/D	Projected Supply During an Average Year as a % of Demand During an Average Year	<b>203.0</b>	<b>232.7</b>	<b>258.9</b>	<b>243.9</b>	<b>231.0</b>
J = A/E	Projected Supply During an Average Year as a % of Demand During a Single Dry Year Demand	<b>187.6</b>	<b>208.1</b>	<b>233.5</b>	<b>221.7</b>	<b>209.8</b>
K = B/E	Projected Supply During a Single Dry Year as a % of Single Dry Year Demand (including surplus)	<b>148.3</b>	<b>168.5</b>	<b>182.3</b>	<b>171.2</b>	<b>160.7</b>

[1] Projected supplies include current supplies and supplies under development. This data was obtained from Metropolitan's 2010 RUWMP, adopted by the Board on November 9, 2010 (Tables 2-9 and 2-11).

[2] Demand data obtained from Metropolitan's 2010 RUWMP, adopted by the Board on November 9, 2010 (Tables 2-9 and 2-11).

**Table 4.2-2**  
**Metropolitan's Regional Water Supply/Demand Reliability Projections (AFY)**  
**for Average and Multiple Dry Years**

Row	Region Wide Projections	2015	2020	2025	2030	2035
<b>Supply Information</b>						
A	Projected Supply During an Average Year <sup>[1]</sup>	4,073,000	4,499,000	5,140,000	4,998,000	4,865,000
B	Projected Supply During Average of 3 Dry Year Period <sup>[1]</sup>	2,652,000	2,970,000	3,253,000	3,214,000	3,170,000
C = B/A	Projected Supply During the Average Year of a 3-Dry Year Period as a % of Average Supply	<b>65.1</b>	<b>66.0</b>	<b>63.3</b>	<b>64.3</b>	<b>65.2</b>
<b>Demand Information</b>						
D	Projected Demand During an Average Year <sup>[2]</sup>	2,006,000	1,933,000	1,985,000	2,049,000	2,106,000
E	Projected Demand During Average of 3-Dry Year Period <sup>[2]</sup>	2,236,000	2,188,000	2,283,000	2,339,000	2,399,000
F = E/D	Projected Demand During the Average Year of a 3-Dry Year Period as a % of Average Demand	<b>111.5</b>	<b>113.2</b>	<b>115.0</b>	<b>114.2</b>	<b>113.9</b>
<b>Surplus Information</b>						
G = A-D	Potential Surplus During an Average Year	2,067,000	2,566,000	3,155,000	2,949,000	2,759,000
H = B-E	Potential Surplus During Average of 3-Dry Year Period	416,000	782,000	970,000	875,000	771,000
<b>Additional Supply Information</b>						
I = A/D	Projected Supply During an Average Year as a % of Demand During an Average Year	<b>203.0</b>	<b>232.7</b>	<b>258.9</b>	<b>243.9</b>	<b>231.0</b>
J = A/E	Projected Supply During an Average Year as a % of Demand During an Average Year of a 3-Dry Year Period	<b>182.2</b>	<b>205.6</b>	<b>225.1</b>	<b>213.7</b>	<b>202.8</b>
K = B/E	Projected Supply During an Average Year of a 3-Dry Year Period as a % of an Average 3-Dry Year Demand	<b>118.6</b>	<b>135.7</b>	<b>142.5</b>	<b>137.4</b>	<b>132.1</b>

[1] Projected supplies include current supplies and supplies under development. This data was obtained from Metropolitan's November 2010 RUWMP, adopted by the Board on November 9, 2010, (Tables 2-10 and 2-11).

[2] Demand data obtained from Metropolitan's November 2010 RUWMP, adopted by the Board on November 9, 2010, (Tables 2-10 and 2-11).

**Calleguas Municipal Water District Supplies and Demands**

Calleguas utilized Metropolitan's water supply reliability analysis along with all of their purveyor's projections, including VCWWD No. 1, to develop their own reliability projections. In all future projection periods they also had surplus imported water projected. A copy of their projected imported water supply surpluses by year for normal, single dry and multiple dry years are shown below. It should be noted that there was a deficit shown for existing (2010) conditions but this was more than made up by the active conservation efforts of Calleguas and all of Metropolitan's retail agencies.

**Table 4.2-3**  
**Calleguas Supply versus Demand for Average Conditions**

Parameter	Volume (ac-ft per year)					
	2010	2015	2020	2025	2030	2035
Average Year Demand	171,776	179,818	188,687	192,121	198,164	202,160
Average Year Local Supply	54,909	66,434	70,404	70,974	73,354	74,055
Imported Demand on MWD	116,867	113,384	118,283	121,147	124,810	128,105
Metropolitan Available Supplies	118,546	129,004	136,966	140,753	142,365	143,777
Surplus/(Deficit) as a % of Demand	1.4%	13.8%	15.8%	16.2%	14.1%	12.2%

**Table 4.2-4**  
**Calleguas Supply versus Demand for Dry Year Conditions**

Parameter	Volume (ac-ft per year)					
	2010	2015	2020	2025	2030	2035
Dry Year Demand	176,548	185,960	194,699	198,843	206,556	211,547
Dry Year Local Supply	55,711	67,333	71,511	72,096	74,592	75,310
Imported Demand on MWD	120,837	118,627	123,188	126,747	131,964	136,237
Metropolitan Dry Year Allocation <sup>[1]</sup>	112,042	131,876	139,975	143,819	145,537	147,013
Surplus/(Deficit) as a % of Demand <sup>[2]</sup>	(7.3%)	11.2%	13.6%	13.5%	10.3%	7.9%

[1] Metropolitan's projected 2010 dry-year allocation in a non-shortage condition was 121,313 ac-ft. Actual allocation for 2010 was 112,042 ac-ft due to ongoing drought conditions and Bay-Delta issues.

[2] Demand management measures and cooler than normal weather helped Calleguas purveyors accommodate the reduced Metropolitan allocation.

**Table 4.2-5  
Calleguas Supply versus Demand for Multiple Dry Year Conditions**

Parameter	Volume (ac-ft per year)					
	2010	2015	2020	2025	2030	2035
Multiple Dry Year Demand	176,728	185,654	194,330	18,448	205,556	210,205
Multiple Dry Year Local Supply	54,376	60,301	64,489	65,793	66,834	67,574
Imported Demand on Metropolitan	122,352	125,353	129,841	132,655	138,722	142,631
Metropolitan Dry Year Allocation <sup>[1]</sup>	-	131,104	139,985	145,255	148,545	149,548
Surplus/(Deficit) as a % of Demand	-	4.6%	7.8%	9.5%	7.1%	4.8%

[1] Metropolitan does not project multiple dry year supplies for the current year, only future conditions. For 2010 conditions, refer to the single dry year supply versus demand analysis.

### **4.3 VULNERABILITY OF WATER SUPPLY TO SEASONAL OR CLIMATIC SHORTAGE**

As mentioned in Section 1, the District is located in a semi-arid coastal environment. The area must depend on imported water supplies since natural precipitation is limited and the District cannot pump enough to fully meet its needs. Climatological data in California has been recorded since the year 1858. During the twentieth century, California has experienced three periods of severe drought: 1928-34, 1976-77 and 1987-91. The year 1977 is considered to be the driest year of record in the Four Rivers Basin by DWR. These rivers flow into the San Francisco Bay Delta and are the main source of water for the SWP. Southern California and, in particular, Ventura County, sustained few adverse impacts from the 1976-77 drought, but the 1987-91 and the 2008-2010 droughts created considerably more concern for Southern California and Ventura County.

As a result, the District is vulnerable to water shortages due to its climatic environment and seasonally hot summer months. Response to a future drought should follow the water use efficiency mandates of the Metropolitan Water Surplus and Drought Management (WSDM) Plan, along with implementation of the appropriate stage of the District's Water Conservation Plan. These programs are more specifically discussed in Section 8.

### **4.4 PLANNED WATER SUPPLY PROJECTS AND PROGRAMS TO MEET PROJECTED WATER USE**

#### **4.4.1 Ventura County Waterworks District No. 1 Projects**

The District continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff continues to ensure the water quality is safe and the water supply will meet present and future needs in an environmentally and economically responsible manner. The District consistently coordinates its long-term water shortage planning with Calleguas and FCGMA as described in other sections of this Plan.



The District projects water demand will remain relatively constant over the next 25 years due to minimal growth combined with water conservation efforts. Any new projects will be implemented to better manage and take advantage of the Las Posas Groundwater Basin resource, to increase recycled water use, and to replace or upgrade inefficient wells, rather than to support population growth and new development. Projects included in the District's Capital Improvement Program will improve the District's water supply reliability and enhance water operations. Those projects include the following:

- Moorpark Desalter – A Preliminary Design Report has been prepared. Following construction of a pilot test well, the District will prepare CEQA documents and enter into discussions with FCGMA regarding pumping South Las Posas Basin groundwater without extraction allocations, followed by final design and construction. This project will add 5,000 AFY of reliable, local supply to the District, reducing the need for imported water.
- Recycled Water Expansion – The existing tertiary treatment capacity of the Moorpark Wastewater Treatment Plant is currently 1.5 mgd. Expansion of the recycled water distribution system is planned to serve additional tertiary treated effluent from the Plant to Moorpark Country Club for golf course irrigation and to agricultural irrigation customers in that general vicinity. While this improvement is not to the domestic water system, it will enhance water supply to the District by reducing the need for imported water because the District is converting existing uses currently being served from the domestic water system to the recycled water system. This system should serve approximately 1,100 AFY of recycled water. In the future (anticipated by 2020), tertiary treatment capacity at the Moorpark Wastewater Treatment Plant is planned to be expanded to 3.0 mgd, as flows at the Plant increase and the distribution system will be expanded to serve additional customers up to approximately 1,600 AFY.
- Well No. 20 Pumps & Water Treatment Facility – Adds reliability to groundwater supply system (completed in April 2011).
- Home Acres Reservoir and Piping – Adds storage to water system.
- 994 & 1250 Pressure Zones Connection – Adds reliability to water system.
- Conversion of Chemical Feed System – Converts disinfection to chloramines for Well Nos. 95, 96, 97 & 98 to match imported water disinfection method.
- Well Nos. 95 & 98 Water Treatment Facility – Enhance water quality of these sources of supply.
- 1.0 MG 944 Zone Reservoir – Add storage to water system.
- Overall Water System Improvements – Includes replacement of pressure regulating stations and pipeline additions/replacements to enhance system operations and reliability.

#### **4.4.2 Regional Agency Projects**

Since the District purchases imported water from the SWP from Metropolitan, via Calleguas, the projects implemented by Metropolitan to secure their water supplies have a direct effect on the District. In addition, Calleguas' and FCGMA's planned projects and groundwater and recycled water programs also benefit the District.

##### ***Metropolitan Water District of Southern California (Metropolitan)***

Metropolitan is implementing water supply alternative strategies for the region and on behalf of their member agencies to ensure available water in the future. Some of the strategies identified in Metropolitan's 2010 UWMP and referenced in previous sections of this Plan include:

- Conservation
- Water recycling and groundwater recovery
- Storage and groundwater management programs within the Southern California region
- Storage programs related to the SWP and the Colorado River
- Other water supply management programs outside of the region

These programs and strategies are discussed in further detail below.

##### ***Conservation Target***

Metropolitan's conservation policies and practices are shaped by its Integrated Resource Plan and the California Urban Water Conservation Council (CUWCC) *Memorandum of Understanding Regarding Water Conservation in California*.

##### ***Recycled Water, Groundwater Recovery, and Desalination Target***

Metropolitan supports the use of alternative water supplies such as recycled water and degraded groundwater when there is a regional benefit to offset imported water supplies. Currently, about 335 TAF per year of recycled water is permitted for use within Metropolitan's service area. Recycled uses include irrigation, commercial and industrial, seawater intrusion barriers, and groundwater recharge applications. Metropolitan estimates that an additional 458 TAF per year of new recycled water usage can be developed by 2035 with a total potential recycled water usage of 1.0 MAF by 2050. Most of the current recycled usage is for irrigation, groundwater replenishment and seawater barriers, with smaller amounts used in industrial applications.

Metropolitan recognizes the importance of member agencies developing local supplies and has implemented several programs to provide financial assistance. Metropolitan's incentive programs include:

- *Competitive LRP*: Supports the development of cost-effective water recycling and groundwater recovery projects that reduce demands for imported supplies.
- *Seawater Desalination Program (SDP)*: Supports the development of seawater desalination within Metropolitan's service area. Additional information on the SDP program is included later in this section.

### **Regional Groundwater Conjunctive Use Target**

Other programs within Metropolitan, which are aimed at maximizing water supplies, include storage and groundwater management programs. The Integrated Resource Plan Update identified the need for dry-year storage within surface water reservoirs and the need for groundwater storage. In 2002, Diamond Valley Lake reached its full storage capacity of 800,000 AF. Approximately 400,000 AF of this total is dedicated for dry-year storage. Metropolitan has also developed a number of local programs to increase storage in the groundwater basins. The programs include:

- *Las Posas Basin*: In 1995, Metropolitan and Calleguas Municipal Water District developed facilities for groundwater storage and extraction from the Las Posas Basin. Calleguas recently took over this program from Metropolitan who had the right to store up to 210,000 AF of water in this basin with expected yields of approximately 47,000 AF of groundwater from the basin each year.
- *Proposition 13 Projects*: In 2000, DWR selected Metropolitan to receive financial funding to help fund the Southern California Water Supply Reliability Projects Program. The program coordinates eight conjunctive use projects with a total storage capacity of 195 TAF and a dry-year yield of 65 TAF per year.
- *Raymond Basin*: In January 2000, Metropolitan entered into agreements with the City of Pasadena and Foothill Municipal Water District to implement a groundwater storage program anticipated to yield 22 TAF per year by 2010.
- *Other Programs*: Metropolitan intends to expand the conjunctive use programs to add another 80 TAF to groundwater storage. Other basins in the area are being evaluated for possible conjunctive use projects.

### **State Water Project Target**

The major actions Metropolitan is completing to improve SWP reliability include the following previously referenced programs:

- Sacramento Valley Water Management Agreement (Phase 8 Settlement)
- Monterey Amendment
- SWP Terminal Storage
- Yuba Dry-year Water Purchase Program
- DWCV SWP Table A Transfer

- DWCV Advance Delivery Program
- DWCV Other SWP Deliveries

### **Colorado River Aqueduct (CRA) Target**

Metropolitan also receives imported water from the CRA. Metropolitan, Imperial IID and Coachella Valley Water District (CVWD) executed the Quantification Settlement Agreement (QSA) in October 2003. The QSA established the baseline water use for each agency and facilitated the transfer of agricultural water to urban uses. A number of programs have been identified to assist Metropolitan meet their target goal of 1.2 MAF per year from the CRA. The following information on these programs has been extracted from the Metropolitan's 2010 Regional UWMP:

- *Imperial Irrigation District / Metropolitan Water District Conservation Program:* Under a 1988 agreement, Metropolitan has funded water efficiency improvements within IID's service area in return for the right to divert the water conserved by those investments. Under this program, IID implemented a number of structural and nonstructural measures, including the lining of existing earthen canals with concrete, constructing local reservoirs and spill interceptor canals, installing non-leak gates, and automating the distribution system. Other implemented programs include the delivery of water to farmers on a 12-hour rather than a 24-hour basis and improvements in on-farm water management through the installation of tailwater pumpback systems, and drip irrigation systems. Through this program, Metropolitan obtained an additional 105 TAF per year, on average upon completion of program implementation. Execution of the QSA and amendments to the 1988 and 1989 agreements resulted in changes in the availability of water under the program, extending the term to 2078 if the term of the QSA extends through 2077 and guaranteeing Metropolitan at least 85 TAF per year. The remainder of the conserved water is available to CVWD.
- *Palo Verde Land Management, Crop Rotation, and Water Supply Program:* In May 2004, Metropolitan's Board authorized a 35-year land management, crop rotation, and water supply program with PVID. Under the program, participating farmers in PVID are paid to reduce their water use by not irrigating a portion of their land. A maximum of 29 percent of the lands within the Palo Verde Valley can be fallowed in any given year. Under the terms of the QSA, water savings within the PVID service area are made available to Metropolitan. This program provides up to 133 TAF of water available to Metropolitan in certain years, and a minimum of 33 TAF per year. As previously noted, in 2005, 2006, 2007, 2008, and 2009 approximately 108.7, 105.0, 72.3, 94.3, and 102.2 TAF of water, respectively, were saved and made available to Metropolitan. In March 2009, Metropolitan and PVID entered into a one-year supplemental fallowing program within PVID that provides for the fallowing of additional acreage, with savings projected to be as much as 62 TAF. Of that total, 24.1 TAF of water was saved in 2009, with the balance to be made available in 2010.

- *Southern Nevada Water Authority and Metropolitan Storage and Interstate Release Agreement:* Southern Nevada Water Authority (SNWA) has undertaken extraordinary water conservation measures to maintain its consumptive use within Nevada's basic apportionment of 300 TAF. The success of the conservation program has resulted in unused basic apportionment for Nevada. As SNWA expressed interest in storing a portion of the water with Metropolitan, the agencies along with the United States and the Colorado River Commission of Nevada entered into a storage and interstate release agreement in October 2004. Under the agreement, additional Colorado River water supplies are made available to Metropolitan when there is space available in the CRA to receive the water. Metropolitan has received 70 TAF through 2009. SNWA may call on Metropolitan to reduce its Colorado River water order to return this water no earlier than 2019, unless Metropolitan agrees otherwise.
- *Lower Colorado Water Supply Project:* In March 2007, Metropolitan, the City of Needles, and the USBR executed a Lower Colorado Water Supply Project contract. Under the contract, Metropolitan receives, on an annual basis, Lower Colorado Water Supply Project water unused by Needles and other entities with no rights or insufficient rights to use of Colorado River water in California, the beneficiaries of the project. A portion of the payments made by Metropolitan to Needles are placed in a trust fund for potentially acquiring a new water supply for Needles and other users of the Project should the groundwater pumped from the project's wells become too saline for use. In 2009, Metropolitan received 2.3 TAF from this project.
- *Lake Mead Storage Program:* In May 2006, Metropolitan and the USBR executed an agreement for a demonstration program that allowed the agency to leave conserved water in Lake Mead that would otherwise have been used in 2006 and 2007. USBR would normally make unused water available to other Colorado River water users, so the program included a provision that water left in Lake Mead must be conserved through extraordinary conservation measures and not simply be water that was not needed by Metropolitan in the year it was stored. This extraordinary conservation was accomplished through savings realized under the Palo Verde Land Management, Crop Rotation, and Water Supply Program. Through the two-year demonstration program, Metropolitan created 44.8 TAF of "Intentionally Created Surplus" (ICS) water. In December 2007, Metropolitan entered into agreements to set forth the rules under which ICS water is developed, and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead, created through extraordinary conservation, that is available for delivery in a subsequent year is reduced by a one-time deduction of five percent, resulting in additional system water in storage in the lake, and an annual evaporation loss, beginning in the year following the year the water is stored. Metropolitan created 55.8 TAF of ICS water through the Palo Verde Land Management, Crop Rotation, and Water Supply Program in 2009.

As of January 1, 2010, Metropolitan had a total of 79.8 TAF of Extraordinary Conservation ICS water in Lake Mead. The December 2007 federal guidelines concerning the operation of the Colorado River system reservoirs provided the ability for agencies to create “System Efficiency ICS” through the development and funding of system efficiency projects that save water that would otherwise be lost from the Colorado River. To that end, in 2008 the Central Arizona Water Conservation District (CAWCD), SNWA, and Metropolitan contributed funds for the construction of the Drop 2 Reservoir by the USBR. The purpose of the Drop 2 Reservoir is to increase the capacity to regulate deliveries of Colorado River water at Imperial Dam reducing the amount of excess flow downstream of the dam by approximately 70 TAF annually. In return for its \$28.7 million contribution toward construction, 100 TAF of water that remains stored in Lake Mead was assigned to Metropolitan as System Efficiency ICS. As of January 1, 2010, Metropolitan had 66 TAF of System Efficiency ICS water in Lake Mead.

In 2009, Metropolitan entered into an agreement with the United States, SNWA, the Colorado River Commission of Nevada, and CAWCD to have USBR conduct a one-year pilot operation of the Yuma Desalting Plant at one-third capacity. The pilot operation began in May 2010 and is providing data for future decision making regarding long-term operation of the Plant and developing a near-term water supply. Metropolitan’s contribution toward plant operating costs is expected to secure 23.2 TAF of System Efficiency ICS by 2011.

- *Hayfield Groundwater Storage Program:* The Hayfield Groundwater Storage Program will allow CRA water to be stored in the Hayfield Groundwater Basin in east Riverside County (about 50 miles east of Palm Springs) for future withdrawal and delivery to the CRA. In June 2000, the Metropolitan Board approved the implementation of the Hayfield program and authorized storage of 800 TAF of CRA supplies when available. As of 2003, there were over 70 TAF in storage. At that time, construction of facilities for extracting the stored water began, but it was then deferred because drought conditions in the Colorado River watershed resulted in a lack of surplus supplies for storage. A prototype well was completed in August 2009. Hydrogeologic investigations indicate that conversion of the prototype well into a production well could extract as much as 5 TAF per year of previously stored water. When water supplies become more plentiful, Metropolitan may pursue this program and develop storage capacity of about 400 TAF.

### ***CVP/SWP Storage and Transfers Target***

Metropolitan has focused on voluntary short and long-term transfer and storage programs with CVP and other SWP contractors. These previously referenced programs include:

- Semitropic Storage Program
- Arvin-Edison Storage Program

- San Bernardino Valley Metropolitan Storage Program
- Kern-Delta Water District Storage Program
- Mojave Storage Program
- Central Valley Transfer Programs

Metropolitan's 2010 Regional UWMP indicates these programs can supply 402,000 AFY, 306,000 AFY and 274,000 AFY in average, single dry and multiple dry years, respectively in the year 2030.<sup>33</sup>

### ***Calleguas Municipal Water District (Calleguas) Projects***

Calleguas has focused its planning efforts on using existing supplies more efficiently and maximizing local water resources. Working cooperatively with local agencies, Calleguas supports a number of local recycling and groundwater recovery projects to offset increasing imported water demands. The following projects include a combination of wastewater reclamation, brackish groundwater recovery, and regional salinity management programs. It is important to note that the effect of each of these projects on groundwater resources and environmental compliance must be evaluated and approved before they can be implemented.

- ***Regional Recycling Projects:*** Calleguas is working with local agencies to implement various water recycling projects. As discussed previously, recycled wastewater is used for beneficial use applications including agricultural and non-agricultural irrigation, industrial use, and groundwater recharge.
  - *Camarillo Recycled Water* – A portion of the treated effluent from the Camarillo WRP is pumped to Smith Ranch for irrigation of non-food crops. Approximately 500 AFY of recycled water is projected to be beneficially used in 2015 and beyond. In addition, Camarillo Sanitary District has agreements with Camrosa Water District that allow for delivery of tertiary treated recycled water to Camrosa.
  - *Camrosa Water District Recycled Water* – Camrosa Water District is involved in three recycled water projects: the Camrosa WRF, the Camarillo Water Reclamation Plant and the CCDP. The Camrosa WRF treats wastewater to tertiary levels and then distributes it through a recycled water distribution system for use in landscape irrigation. Approximately 980 AFY of recycled water are projected to be beneficially used from the Camrosa WRF in 2010 with that amount increasing to 2,000 AFY by 2015.

The Camrosa Water District and the Camarillo Sanitary District have entered into an agreement to allow for delivery of tertiary treated wastewater to Camrosa from Camarillo. As previously explained, Camrosa also receives recycled water from CCDP. When Camrosa cannot use all of the CCDP water, it is delivered to Pleasant Valley County Water District in exchange for

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<sup>33</sup> Metropolitan's 2010 Regional UWMP, Table 3-3

groundwater credits. The groundwater is pumped by United Water Conservation District for use by Oxnard and Port Hueneme as a local supply.

- *Lake Sherwood/Oak Park Recycled Water* – Triunfo Sanitation District/Las Virgenes Municipal Water District jointly own and operate the Tapia WRF. Approximately 1,450 AFY of recycled water produced from this facility is imrpert into the Calleguas service area and distributed to recycled water customers in Lake Sherwood, Oak Park and North Ranch through agreements between Calleguas, Triunfo, and Las Virgenes.
- *Oxnard GREAT Program* – The City of Oxnard is implementing the GREAT Program, which includes an AWPf consisting of reverse osmosis and advanced oxidation. A portion of the flow from the AWPf will be distributed to meet water demands for irrigation and industrial processes. Approximately 2,700 AFY of recycled water from the GREAT Program is projected to be directly used as recycled water by 2015, increasing to approximately 7,000 AFY by 2035.
- *Simi Valley Water Quality Control Plant* – The Simi Valley Water Quality Control Plant treats wastewater to tertiary standards. The majority of the water is discharged to the Arroyo Simi, however between 60 and 100 AFY is used for dust control and irrigation at the Simi Valley Landfill. The water discharged to the Arroyo Simi ultimately recharges downstream groundwater basins. Pending regulatory approvals, this water could be available to other downstream Calleguas purveyors who could capture the water with groundwater extraction and treatment systems.
- *VCWWD No. 1 Reclaimed Water Distribution System Expansion* – This project was discussed under the District Projects section, above. It currently serves approximately 450 AFY, is anticipated to increase to 1,100 AFY prior to 2015, and 1,600 AFY prior to 2020.
- ***Calleguas Salinity Management Pipeline:*** Calleguas, working with other agencies and stakeholders, initiated the Salinity Management Pipeline (SMP) Project. Currently under construction, the SMP consists of a pipeline system to collect treated wastewater and brine concentrates from municipal WWTPs, groundwater treatment facilities (both municipal and agricultural), industrial operations located within the Calleguas Creek watershed. Water discharged into the SMP will be conveyed to other areas where it can be utilized by agricultural users and possibly for wetland applications. Any remaining water will be discharged into the ocean through an ocean outfall. Operation of the facilities will allow for the use of poor quality water that was previously underutilized and will substantially reduce the amount of salts released into the watershed. Over time, this will reduce salt concentrations in surface water and groundwater within the watershed.

The alignment of the SMP has been strategically located so that it can receive reverse osmosis concentrate from future brackish groundwater recover facilities as well as effluent from wastewater treatment facilities. Providing a means of



disposal of brine waste from the proposed groundwater recovery facilities allows for increased use of a previously underutilized water supply and could ultimately remove an estimated 42,300 tons of salt per year from the watershed. The following sections provide descriptions of anticipated future brackish groundwater recovery projects.

- ***Brackish Groundwater Recovery Projects;*** Water imported by Calleguas and delivered to Calleguas purveyors that is not fully consumed is collected in local sanitary systems and treated at the local wastewater treatment facilities in the area. There are numerous locations within the Calleguas Creek water shed where discharged treated wastewater recharges the local groundwater basins. Much of this groundwater has relatively high dissolved solids and chloride concentrations, which requires that the water be treated with reverse osmosis. The primary purpose of the brackish groundwater recovery projects is to recover this groundwater of poor water quality, thereby increasing the availability and reliability of the region's local water supply.
  - *Moorpark Desalter* – This project is described above under District projects and is estimated to produce 5,000 AFY of high quality potable water prior to 2015 and 10,000 AFY by 2020 and beyond. Reverse osmosis brine concentrate from this proposed desalter would be discharged to the SMP and the potable water would be distributed by the District.
  - *Round Mountain Desalter* – Camrosa Water District plans to construct the Round Mountain Desalter to treat local brackish groundwater using reverse osmosis. Groundwater to be treated at the Round Mountain Desalter will be pumped from an existing well on California State University Channel Islands property in Camarillo. The Round Mountain Desalter will produce about 1,000 AFY of potable water.
  - *Camarillo Desalter* – Similar to the Moorpark Desalter, the Camarillo Desalter would pump and treat brackish groundwater for potable water use and discharge reverse osmosis concentrate to the SMP. A Pilot Study report dated January 2009 indicates that up to 7,000 AFY of high quality potable water could be produced at this location on a sustainable basis. Water produced from this facility would be conveyed to nearby City of Camarillo distribution pipelines and also to nearby Calleguas transmission pipelines for delivery to other Calleguas purveyors.
  - *Other Potential Regional Desalters* – Other regional desalters are being considered and are in various stages of investigation, including desalters owned and operated by the agricultural community. Because these desalters are in the preliminary stages of investigation, potential local supplies produced from these facilities are not included in the local supply projections. However, as the projects become better defined, supplies from these facilities will be included, as appropriate.

- ***Watershed Management Plans:*** There are numerous on-going efforts to protect and improve the water quality within the Calleguas Creek watershed and enhance local water supplies. Information on water projects under consideration by the region, but not specifically discussed herein, can be found in the following two documents:
  - *Calleguas Creek Watershed Management Plan, 2004*
  - *Integrated Regional Water Management Plan for the Watershed Coalition of Ventura County, 2006*

Projects presented in these two documents may yield new local supplies to Calleguas purveyors. As these projects are further advanced, local supply projections will be updated appropriately.

#### **4.5 EXCHANGE OR TRANSFER OPPORTUNITIES**

The District has not entered into any agreements for the transfer or exchange of water other than through Calleguas. However, Metropolitan is exploring options that would benefit the region. These exchanges were discussed earlier under proposed projects for the region.

#### **4.6 DESALINATED WATER OPPORTUNITIES**

Seawater desalination represents a significant opportunity to diversify the region's water resource mix with a new, locally controlled, reliable potable supply. Like conservation, recycling, and other new local supplies, seawater desalination will increase regional supply reliability by offsetting existing and future demands for imported water.

##### ***Regional Desalination Projects Supported by Metropolitan***

As noted in its 2010 Regional UWMP, Metropolitan continues to pursue a target for seawater desalination of 150,000 AFY by 2025, and several local and retail water agencies have identified seawater desalination as an important component of their water supply portfolio in their Urban Water Management Plans.

The implementation of large-scale seawater desalination plants in California offers many opportunities and challenges. In the past decade, advances in energy efficiency and membrane technology have reduced the cost of seawater desalination relative to the costs for imported water supplies and other supply alternatives. Challenges to seawater desalination include high capital and operation costs, pre-treatment design, addressing environmental issues, system integration, and navigating an uncertain permitting process. Metropolitan's member agencies are actively pursuing research into alternative intake and outfall technologies, process designs, and treatment alternatives, which could minimize some of the environmental issues and lower unit costs.

Metropolitan has encouraged the development of seawater desalination projects since it created the Seawater Desalination Program (SDP) in 2001. Metropolitan currently has

four ongoing SDP agreements in place with a fifth one on hold. These five SDP projects, as well as three additional potential desalination projects within Metropolitan's service area, are summarized in Table 4.6-1.

Of the projects listed in Table 4.6-1, the Carlsbad Seawater Desalination project is the farthest along, having obtained all the necessary local, State and Federal permits required to begin construction. However, some legal challenges to these permits surfaced in 2010. Nevertheless, project proponents are hopeful this project can come on-line as early as 2012.

Metropolitan promotes the development of local seawater desalination projects by providing regional facilitation, supporting member agency projects during permit hearings and other proceedings, coordinating responses to potential legislation and regulations, and working with the member agencies to resolve related issues such as greenhouse gas emission standards and seawater intake regulations, which could impact seawater desalination projects. Metropolitan has also formed a special Board Committee to seek additional ways to promote potential projects and explore opportunities for developing regional seawater desalination supplies.

**Table 4.6-1  
Seawater Desalination Program (SDP) and Potential Project Status**

<b>Project</b>	<b>Member Agency Service Area</b>	<b>Annual Capacity (AFY)</b>	<b>Status</b>
Long Beach Seawater Desalination Project	Long Beach Water Department	10,000	Pilot Study (SDP Agreement)
South Orange Coastal Ocean Desalination Project	Municipal Water District of Orange County	16,000-28,000	Pilot Study (SDP Agreement)
Carlsbad Seawater Desalination Project	San Diego County Water Authority	56,000	Permitting (SDP Agreement)
West Basin Seawater Desalination Project	West Basin Municipal Water District	20,000	Pilot Study (SDP Agreement)
<b>Total SDP Desalination Projects</b>		<b>102,000-114,000</b>	
Los Angeles DWP Desalination Project	Los Angeles DWP	28,000	On-Hold
Huntington Beach Seawater Desalination Project	Municipal Water District of Orange County	56,000	Permitting
Camp Pendleton Seawater Desalination Project	San Diego County Water Authority	56,000-168,000	Planning
Rosarito Beach Seawater Desalination Feasibility Study	San Diego County Water Authority	28,000-56,000	Feasibility Study
<b>Total Additional Potential Desalination Projects</b>		<b>168,000-308,000</b>	

### ***Statewide Desalination Projects Supported by the DWR***

As noted on DWR's website<sup>34</sup>, in November 2002, California voters passed Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002. Chapter 6(a) of Proposition 50 allocated the sum of \$50 million for grants for brackish water and ocean water desalination projects. This grant program, administered by DWR, aimed to assist local public agencies in the development of new local water supplies through the construction of brackish water and ocean water desalination projects. The program also aimed to help advance water desalination technology and its use by means of feasibility studies, research and development, and pilot and demonstration projects. Two rounds of funding were conducted (2004 and 2006) under this grant program, which resulted in the investment of about \$50 million to support 48 desalination projects. These projects included seven construction projects, 14 research and development projects, 15 pilot plants and demonstration projects, and 12 feasibility studies.

The California Legislature also approved Assembly Bill 2717, which asked DWR to convene the California Water Desalination Task Force to investigate potential opportunities and impediments for using seawater and brackish water desalination, and to examine what role, if any, the State should play in furthering the use of desalination technology. A primary finding of the Task Force was that economically and environmentally acceptable desalination should be considered as part of a balanced water portfolio to help meet California's existing and future water supply and environmental needs. The Task Force arrived at 41 key findings and made 29 major recommendations relating to seawater and brackish water desalination.<sup>35</sup>

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<sup>34</sup> DWR's desalination website can be accessed at this link: <http://www.water.ca.gov/desalination/>

<sup>35</sup> A complete listing of the Task Force Report's findings and recommendations is available at this website: [http://www.water.ca.gov/desalination/pud\\_pdf/Findings-Recommendations.pdf](http://www.water.ca.gov/desalination/pud_pdf/Findings-Recommendations.pdf)

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## **5 WATER SUPPLY BASELINES AND TARGETS AND WATER SUPPLY RELIABILITY COMPARISON TABLES**

### **5.1 WATER BASELINES AND TARGETS**

To comply with the SBX7-7 water conservation legislation, water suppliers must first establish a baseline water usage, which is then used to set targets for 2015 and 2020. The SBX7-7 legislation stipulates that targets must be established by using one of four allowable methods briefly defined as follows:

- Method 1: Per capita daily use equals eighty percent of the water supplier's baseline per capita usage;
- Method 2: Per capita daily use is set based on performance standards applied to indoor residential use; landscape area water use, and commercial, industrial and institutional use;
- Method 3: Per capita daily use is set at 95 percent of the applicable State hydrologic region target based on DWR's April 30, 2011 draft 20x2020 Water Conservation Plan (VCWWD No. 1 is in the South Coast Region 4); and
- Method 4: Per capita daily use is set based on standards consistent with CUWCC BMPs

Detailed information on the calculation of the District's baseline water usage and 2015 and 2020 per capita water conservation targets can be found in Appendix E, a Technical Memorandum dated April 22, 2011, entitled "20x2020 Baseline Calculation & Water Use Target Method Selection.

As noted in Appendix E, the District's per capita usage baseline average, minimum baseline average and SBX7-7 water conservation targets for 2015 and 2020 have been established as follows:

- Baseline Average (based on 10-year data from 1996-2005) = 223.2 gpcd
- Minimum Baseline Average (based on 5-year data from 2004-2008) = 222.2 gpcd
- 2015 Water Conservation Target = 202.2 gpcd
- 2020 Water Conservation Target = 181.1 gpcd

Method 4 is the most favorable for the District and will be utilized by the District in tracking progress toward target compliance.

### **5.2 WATER SUPPLY RELIABILITY COMPARISON TABLES**

Tables 5.2-1 through 5.2-7 compare the District's anticipated available water supply with expected demands for normal, single dry and multiple dry years beginning in 2010 and extending through 2035.

**Table 5.2-1**  
**VCWWD No. 1**  
**Projected Water Supply and Demand (AFY)**  
**Normal Water Year**

	2015	2020	2025	2030	2035
<b>DEMAND</b>					
Recycled Water	1,100	1,600	1,600	1,600	1,600
<b>Total Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Municipal and Industrial <sup>[1]</sup>	10,215	10,438	11,197	11,995	12,834
Agricultural <sup>[1]</sup>	2,847	2,847	2,847	2,847	2,847
<b>Total Potable</b>	<b>13,062</b>	<b>13,285</b>	<b>14,044</b>	<b>14,842</b>	<b>15,681</b>
<b>TOTAL DEMAND</b>	<b>14,162</b>	<b>14,885</b>	<b>15,644</b>	<b>16,442</b>	<b>17,281</b>
20x2020 Per Capita (GPCD) <sup>[2]</sup>	201.2	180.0	-	-	-
% of 2010 Normal Year Demand (13,447 AF)	105.3	110.7	116.3	122.3	128.5
<b>SUPPLIES</b>					
<b>Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Recovered Groundwater <sup>[3]</sup>	5,000	10,000	10,000	10,000	10,000
Potable Groundwater <sup>[4]</sup>	2,240	2,240	2,240	2,240	2,240
<b>Total Potable Water</b>	<b>7,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>
<b>TOTAL LOCAL SUPPLIES</b>	<b>8,340</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>
Imported Supply Required	5,822	1,045	1,804	2,602	3,441
Imported Calleguas Supply Programmed <sup>[5]</sup>	5,515	6,238	6,997	7,795	8,634
Imported Supply Surplus/(Deficit) as a % of Demand <sup>[6]</sup>	13.8%	15.8%	16.2%	14.1%	12.2%
<b>IMPORT SUPPLY AVAILABLE <sup>[7]</sup></b>	<b>6,275</b>	<b>7,223</b>	<b>8,129</b>	<b>8,891</b>	<b>9,690</b>
<b>TOTAL SUPPLY</b>	<b>14,615</b>	<b>21,063</b>	<b>21,969</b>	<b>22,731</b>	<b>23,530</b>
<b>Supply/Demand Surplus</b>	<b>453</b>	<b>6,178</b>	<b>6,325</b>	<b>6,289</b>	<b>6,249</b>
<b>Difference as a % of Supply</b>	<b>3.1%</b>	<b>29.3%</b>	<b>28.8%</b>	<b>27.7%</b>	<b>26.6%</b>
<b>Difference as a % of Demand</b>	<b>3.2%</b>	<b>41.5%</b>	<b>40.4%</b>	<b>38.3%</b>	<b>36.2%</b>

[1] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to exclude recycled water reported on the first row. Municipal and Industrial: Existing 450 AFY and Proposed by 2015 350 AFY (Moorpark Country Club Golf Course); Agricultural: Proposed by 2015 300 AFY. An Additional 500 AFY of recycled water will come on line between 2015 and 2020 reducing Municipal and Industrial Demand accordingly.

[2] Total Potable Water Demand minus Agricultural and Recycled Water divided by Population (from Table 1.3-2)

[3] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to include an additional proposed 5,000 AFY by 2020. The amount and timing of the Recovered Groundwater shown is subject to an on-going study regarding the impacts of the project on the groundwater basin, subsequent agreement with FCGMA, and Calleguas' completion of the SMP to Moorpark. If these projected volumes are not achieved, imported water would be increased to make up the difference between the amount projected and that achieved (see row titled Supply/Demand Surplus, above).

[4] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were reduced to 2,240 AFY per VCWWD's projections.

[5] Per Calleguas 2010 UWMP, Appendix C

[6] Calleguas Imported Surplus/(Deficit) as a % of Imported Demand, from Table 4.2-3

[7] Imported Calleguas Supply Programmed x (1 + Imported Supply Surplus (Deficit) as a % of Imported Demand)

**Table 5.2-2  
VCWWD No. 1  
Projected Water Supply and Demand  
Single Dry Water Year (AFY)**

	2015	2020	2025	2030	2035
<b>DEMAND</b>					
Recycled Water	1,100	1,600	1,600	1,600	1,600
<b>Total Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Municipal and Industrial <sup>[1]</sup>	12,165	12,268	12,642	14,116	15,063
Agricultural <sup>[1]</sup>	2,847	2,847	2,847	2,847	2,847
<b>Total Potable Water</b>	<b>15,012</b>	<b>15,115</b>	<b>15,489</b>	<b>16,963</b>	<b>17,910</b>
<b>TOTAL DEMAND</b>	<b>16,112</b>	<b>16,715</b>	<b>17,089</b>	<b>18,563</b>	<b>19,510</b>
% of 2010 Normal Year Demand (13,447 AFY)	<b>119.8</b>	<b>124.3</b>	<b>127.1</b>	<b>138.0</b>	<b>145.1</b>
<b>SUPPLIES</b>					
<b>Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Recovered Groundwater <sup>[2]</sup>	5,000	10,000	10,000	10,000	10,000
Potable Groundwater <sup>[3]</sup>	2,240	2,240	2,240	2,240	2,240
<b>Total Potable Water</b>	<b>7,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>
<b>TOTAL LOCAL SUPPLIES</b>	<b>8,340</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>
Imported Supply Required	7,772	2,875	3,249	4,723	5,670
Imported Calleguas Supply Programmed <sup>[4]</sup>	7,465	8,068	8,442	9,916	10,863
Imported Supply Surplus/(Deficit) as a % of Demand <sup>[5]</sup>	11.2%	13.6%	13.5%	10.3%	7.9%
<b>IMPORT SUPPLY AVAILABLE <sup>[6]</sup></b>	<b>8,299</b>	<b>9,167</b>	<b>9,579</b>	<b>10,936</b>	<b>11,722</b>
<b>TOTAL SUPPLY</b>	<b>16,639</b>	<b>23,007</b>	<b>23,419</b>	<b>24,776</b>	<b>25,562</b>
<b>Supply/Demand Surplus</b>	<b>527</b>	<b>6,292</b>	<b>6,330</b>	<b>6,213</b>	<b>6,052</b>
<b>Difference as a % of Supply</b>	<b>3.2%</b>	<b>27.3%</b>	<b>27.0%</b>	<b>25.1%</b>	<b>23.7%</b>
<b>Difference as a % of Demand</b>	<b>3.3%</b>	<b>37.6%</b>	<b>37.0%</b>	<b>33.5%</b>	<b>31.0%</b>

[1] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to exclude recycled water reported on the first row. Municipal and Industrial: Existing 450 AFY and Proposed by 2015 350 AFY (Moorpark Country Club Golf Course); Agricultural: Proposed by 2015 300 AFY. An Additional 500 AFY of recycled water will come on line between 2015 and 2020 reducing Municipal and Industrial Demand accordingly.

[2] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to include an additional proposed 5,000 AFY by 2020. The amount and timing of the Recovered Groundwater shown is subject to an on-going study regarding the impacts of the project on the groundwater basin, subsequent agreement with FCGMA, and Calleguas' completion of the SMP to Moorpark. If these projected volumes are not achieved, imported water would be increased to make up the difference between the amount projected and that achieved (see row titled Supply/Demand Surplus, above).

[3] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were reduced to 2,240 AFY per VCWWD's projections.

[4] Per Calleguas 2010 UWMP, Appendix C

[5] Calleguas Imported Surplus/(Deficit) as a % of Imported Demand, from Table 4.2-4

[6] Imported Calleguas Supply Programmed x (1 + Imported Supply Surplus (Deficit) as a % of Imported Demand)



**Table 5.2-3  
VCWWD No. 1  
Projected Water Supply and Demand (AFY)  
Multiple Dry Water Years**

	2015	2020	2025	2030	2035
<b>DEMAND</b>					
Recycled Water	1,100	1,600	1,600	1,600	1,600
<b>Total Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Municipal and Industrial <sup>[1]</sup>	12,311	12,641	13,512	14,428	15,392
Agricultural <sup>[1]</sup>	2,847	2,847	2,847	2,847	2,847
<b>Total Potable Water</b>	<b>15,158</b>	<b>15,488</b>	<b>16,359</b>	<b>17,275</b>	<b>18,239</b>
<b>TOTAL RETAIL DEMAND</b>	<b>16,258</b>	<b>17,088</b>	<b>17,959</b>	<b>18,875</b>	<b>19,839</b>
% of 2010 Normal Year Demand (13,447 AFY)	<b>120.9</b>	<b>127.1</b>	<b>133.6</b>	<b>140.4</b>	<b>147.5</b>
<b>SUPPLIES</b>					
<b>Recycled Water</b>	<b>1,100</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>	<b>1,600</b>
Recovered Groundwater <sup>[2]</sup>	5,000	10,000	10,000	10,000	10,000
Potable Groundwater <sup>[3]</sup>	2,240	2,240	2,240	2,240	2,240
<b>Total Potable Water</b>	<b>7,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>	<b>12,240</b>
<b>TOTAL LOCAL SUPPLIES</b>	<b>8,340</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>	<b>13,840</b>
Imported Supply Required	7,918	3,248	4,119	5,035	5,999
Imported Calleguas Supply Programmed <sup>[4]</sup>	7,638	8,468	9,339	10,255	11,219
Imported Supply Surplus/(Deficit) as a % of Demand <sup>[5]</sup>	4.6%	7.8%	9.5%	7.1%	4.8%
<b>IMPORT SUPPLY AVAILABLE <sup>[6]</sup></b>	<b>7,988</b>	<b>9,130</b>	<b>10,226</b>	<b>10,981</b>	<b>11,763</b>
<b>TOTAL RETAIL SUPPLY</b>	<b>16,328</b>	<b>22,970</b>	<b>24,066</b>	<b>24,821</b>	<b>25,603</b>
<b>Supply/Demand Surplus</b>	<b>70</b>	<b>5,882</b>	<b>6,107</b>	<b>5,946</b>	<b>5,764</b>
<b>Difference as a % of Supply</b>	<b>0.4%</b>	<b>25.6%</b>	<b>25.4%</b>	<b>24.0%</b>	<b>22.5%</b>
<b>Difference as a % of Demand</b>	<b>0.4%</b>	<b>34.4%</b>	<b>34.0%</b>	<b>31.5%</b>	<b>29.1%</b>

[1] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to exclude recycled water reported on the first row. Municipal and Industrial: Existing 450 AFY and Proposed by 2015 350 AFY (Moorpark Country Club Golf Course); Agricultural: Proposed by 2015 300 AFY. An Additional 500 AFY of recycled water will come on line between 2015 and 2020 reducing Municipal and Industrial Demand accordingly.

[2] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were adjusted to include an additional proposed 5,000 AFY by 2020. The amount and timing of the Recovered Groundwater shown is subject to an on-going study regarding the impacts of the project on the groundwater basin, subsequent agreement with FCGMA, and Calleguas' completion of the SMP to Moorpark. If these projected volumes are not achieved, imported water would be increased to make up the difference between the amount projected and that achieved (see row titled Supply/Demand Surplus, above).

[3] Numbers reported in Calleguas 2010 UWMP Update, Appendix C, were reduced to 2,240 AFY per VCWWD's projections.

[4] Per Calleguas 2010 UWMP, Appendix C

[5] Calleguas Imported Surplus/(Deficit) as a % of Imported Demand, from Table 4.2-5

[6] Imported Calleguas Supply Programmed x (1 + Imported Supply Surplus (Deficit) as a % of Imported Demand)

As shown on Table 5.2-1 for Normal Water Years, which includes projected growth, following the Total Demand row, the per capita consumption for 2020 is 180.0 gpcd, which would achieve the target goal of 181.1 gpcd; and the 2015 projection is 201.2 gpcpd, which would also achieve the target goal of 202.2 gpcd. These per capita water use figures in Table 5.2-1 subtract out agricultural water use and include the credit for the District's existing and proposed recycled water use. Demands were developed using District projections provided to Calleguas (which tend to be conservative) and then divided by the population projections from SCAG, delayed as recommended by the City of Moorpark due to economic considerations, as discussed previously. Projections also assume demands will return to pre-drought or pre-water allocation levels, when some of the water conservation achieved over the past two years will likely remain and result in a permanent reduction of demands.

Even though the target 20x2020 water conservation goals are projected to be met by the District the per capita consumption will be monitored annually to track progress and the District will also continue to pursue water conservation efforts on their own and along with Calleguas.

### 5.3 LOW-INCOME PROJECTED WATER DEMANDS

The California Water Code, Division 6, Part 2.6, Section 10631.1<sup>36</sup> requires each urban water retailer to include projected water use for single family and multi-family residential housing needed for lower income households as defined in Section 50079.5<sup>37</sup> of the Health and Safety Code, as identified in the housing element of the City or County the water agency serves.

Since the District's population and housing units is approximately 97 percent of the City of Moorpark, we will use the City's share of the regional housing needs for this section. The City of Moorpark's fair share for affordable housing units under the 2006-2014 Regional Housing Needs Assessment (RHNA) requirements is as shown in Table 5.3-1.<sup>38</sup> A new Housing Element that addresses this RHNA is under preparation by SCAG and expected to be completed in 2011.

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<sup>36</sup> All California Law Codes can be accessed at this website: <http://www.leginfo.ca.gov/calaw.html>; Section 10631.1 of the California Water Code is available at this website:

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&group=10001-11000&file=10630-10634>

<sup>37</sup> Section 500.79.5 of the Health and Safety Code is available at this website:

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=50001-51000&file=50050-50106>

<sup>38</sup> City of Moorpark Housing Element, March 16, 2011.

**Table 5.3-1**  
**City of Moorpark Share of Regional Housing Needs**  
**2006-2014 RHNA**

Income Group	Number of Units	Percentage
Very Low	363	22.4%
Low	292	18.1%
Moderate	335	20.7%
High	627	38.8%
<b>TOTAL</b>	<b>1,617</b>	<b>100.0%</b>

As shown in Table 5.3-1, the very low and low income dwelling units total to 665 (363+292) by 2014, which are the lower income housing units subject to the new Water Code requirements described in the first paragraph of this section. According to the City's Housing Element report dated March 16, 2011, a total of 34 low income units were completed from January 2006 to December 2010, leaving a remaining need for 631 (665-34) very low and low income units. Using the 2010 residential usage of 6,676 AFY from Table 6.1-1 and the 2010 population of 38,703 from Table 1.3-2, we get an average use of 154 gpcd. Using the City-wide population per dwelling unit projected by DOF for 2010 of 3.53, these 631 dwelling units would equate to a population of approximately 2,227, which would generate a total demand of 342,958 gpd or 384 AFY at the 154 gpcd calculated above. There is more than enough increase shown in the M&I (and specifically residential) water demand increases to accommodate this increase in low income housing shown in the District's projections between 2010 and 2015. However it should be noted that the population projections provided by the City of Moorpark only show a population increase of 1,731 between 2010 and 2015, which would not include all of the 2,227 population that would be generated assuming the current people per dwelling unit factor within the City. However, there is adequate supply to meet the lower income housing needs included in the District's projections, if it is all constructed.

#### **5.4 WATER USE REDUCTION PLAN**

As demonstrated from the historical water usage data presented in Appendix E, the District has realized substantial reductions in per capita water usage in recent years. However, the District has not achieved its 2020 water conservation target in past years but did achieve its interim 2015 target of 202.2 gpcd in 2010. But since 2010 was a water allocation year for Metropolitan, the District should not rely on water allocation years to meet these targets.

The District plans to meet or exceed its SBX7-7 water conservation targets, through a variety of means including:

- Completing its current expansion of the recycled water distribution system to serve an additional 350 AFY of irrigation demands in the Moorpark Country Club golf course area and 300 AFY of agricultural irrigation customers;
- Expanding the tertiary treatment capacity of the Moorpark Wastewater Treatment Plant as flow increase to 3.0 mgd and expanding the recycled water distribution system to supply another 500 AFY of recycled water to existing M&I irrigation users by 2020;
- Encouraging residents and businesses in the District to conserve water;
- Educating the public through a variety of programs on the need for continued water conservation;
- Considering restructure of the third tier water rate to encourage increased water conservation to comply with 20x2020 targets;
- Continuing to operate and maintain the water distribution system with an eye toward maintaining current levels of water loss within AWWA standards and minimizing future losses by repairing or eliminating any leaks that may develop as soon as practical;
- Requiring new developments to install water conservation fixtures and landscape with low water use plant materials (xeriscape) pursuant to the City of Moorpark's new landscape ordinance in compliance with State requirements;
- Looking for additional landscape areas that could be converted from the potable system to the recycled water system.

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## 6 WATER USE PROVISIONS

### 6.1 PAST, CURRENT AND PROJECTED WATER USE AMONG SECTORS

Over the past five years, new connections have been added at a rate of approximately 1.3 percent per year, which is a decline from previous years due to economic conditions. Due to new plumbing efficiency standards, landscape guidelines, and other water use efficiency programs, water demand is projected to increase at a declining rate of less than one percent per year in future years. Table 6.1-1 presents past, current and projected water use between 2005 and 2035. As shown in Table 6.1-1, water use for 2010 was down even though the number of connections increased, which can be accounted for due to the fact that it was a water allocation year due to drought conditions and above average rainfall. The fairly large increase in water use shown in Table 6.1-1 is primarily due to the fact that the future years are projected as normal years, not dry years.

**Table 6.1-1  
Past, Current and Projected Water Use by Billing Classification (AF)**

Billing Class (Rev. Code)	Actual		Projected				
	2005	2010	2015	2020	2025	2030	2035
Residential (0)	6,716	6,676	7,807	7,979	8,566	9,182	9,831
Commercial (2)	675	697	815	833	894	959	1,026
Agricultural (3)	2,615	2,646	2,847	2,847	2,847	2,847	2,847
Institutional/Governmental (4)	766	752	879	899	965	1,034	1,107
Industrial (5)	248	171	200	204	219	235	252
Other (6,7&8) <sup>[1]</sup>	372	15	18	18	19	21	22
<b>Subtotal</b>	<b>11,392</b>	<b>10,957</b>	<b>12,566</b>	<b>12,780</b>	<b>13,510</b>	<b>14,278</b>	<b>15,085</b>
Unaccounted for System Losses <sup>[2]</sup>	480	369	496	505	534	564	596
<b>Total Potable Water Use</b>	<b>11,872</b>	<b>11,326</b>	<b>13,062</b>	<b>13,285</b>	<b>14,044</b>	<b>14,842</b>	<b>15,681</b>
Recycled Water		448	1,100	1,600	1,600	1,600	1,600
<b>TOTAL WATER USE</b>	<b>11,872</b>	<b>11,774</b>	<b>14,162</b>	<b>14,885</b>	<b>15,644</b>	<b>16,442</b>	<b>17,281</b>

Source: Fiscal Year 2005 and 2010 data from District production and consumption data (FY ending June 30); all future water use by billing class from Table 5.2-1 and was proportioned per FY 2010.

[1] Includes Construction, Hydrant and Fire Usage

[2] 2005 and 2010 unaccounted for losses are based on actual data; all other years based on an estimated average loss of 3.8% (average percentage loss over the past six years (FY 2005-2010))

Unaccounted-for water is the difference between water production and water consumption and represents “lost” water. Unaccounted-for water occurs for a number of reasons:

- Water lost from system leaking, i.e., from pipes, valves, pumps, and other water system appurtenances.

- The District performs hydrant testing to monitor the level of fire protection available throughout the service area. The District performs hydrant flushing to eliminate settled sediment and ensure better water quality. Hydrant testing and flushing is not metered. However, this quantity of water is estimated and taken into consideration when calculating unaccounted-for water.
- Water used by the Fire Department to fight fires. This water is not metered but is estimated and included under the “Other” category.
- Customer meter inaccuracies. Meters have an inherent accuracy for a specified flow range. However, flow above or below this range is usually registered at a lower rate. Meters become less accurate with time due to wear. To attempt to minimize these inaccuracies, the District has a meter replacement program.

Unaccounted-for water was 3.3 percent in 2009/10, and based on records for 2004/05 through 2009/10 (over the past six years), unaccounted-for water has averaged 3.8 percent.

## 6.2 WATER SERVICE CONNECTIONS BY SECTOR

Table 6.2-1 shows the current and projected number of water service customers by sector from 2005 through 2035.

**Table 6.2-1**  
**Number of Water Service Connections by Billing Classification**

Billing Class (Rev. Code)	Actual		Projected				
	2005	2010	2015	2020	2025	2030	2035
Residential (0)	9,106	9,697	11,339	12,151	13,003	13,899	14,840
Commercial (2)	203	219	256	274	294	314	335
Agricultural (3)	171	172	172	172	172	172	172
Institutional/Governmental (4)	132	158	185	198	212	226	242
Industrial (5)	72	70	82	88	94	100	107
Other (6,7&8) <sup>[1]</sup>	235	257	301	322	345	368	393
<b>Total Connections</b>	<b>9,919</b>	<b>10,573</b>	<b>12,335</b>	<b>13,205</b>	<b>14,119</b>	<b>15,080</b>	<b>16,090</b>

Source: Fiscal Year 2005 and 2010 data from District production and consumption data (FY ending June 30); all future projections were proportioned per fiscal year 2010 usage per connection. Excludes recycled water connections

[1] Includes Construction, Hydrant and Fire Connections

## **7 WATER DEMAND MANAGEMENT MEASURES (DMM)**

### **7.1 INTRODUCTION**

On July 30, 1991, the District elected to become Signatory to the Memorandum of Understanding (MOU) Regarding Best Management Practices (BMPs) for Urban Water Conservation with the California Urban Water Conservation Council (CUWCC).

Calleguas implements many of the urban water conservation BMPs on behalf of its member agencies, including VCWWD No. 1. Calleguas' 2010 Regional Urban Water Management Plan should be referred to for a detailed discussion of each regional BMP program.

### **7.2 DETERMINATION OF DMM IMPLEMENTATION**

As Signatory to the MOU, the District has committed to a good faith effort in implementing the 14 cost-effective BMPs. "Implementation" means achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve the level of activity called for in each BMP's definition, and to satisfy the commitment by the signatories to use good faith efforts to optimize savings from implementing BMPs as described in the MOU. A BMP as defined in the MOU is a "practice for which sufficient data are available from existing water conservation practices to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water agencies to carry out."

These 14 BMPs include technologies and methodologies that have been sufficiently documented in multiple demonstration projects that result in more efficient water use and conservation. Many of the BMPs are implemented by the District in coordination with Calleguas and their regional conservation programs. Specifically, the 14 BMPs include:

1. Water survey programs for single-family residential and multifamily residential customers
2. Residential plumbing retrofit
3. System water audits, leak detection, and repair
4. Metering with commodity rates for all new connections and retrofit of existing connections
5. Large landscape conservation programs and incentives
6. High-efficiency washing machine rebate programs
7. Public information programs
8. School education programs
9. Conservation programs for commercial, industrial, and institutional accounts



10. Wholesale agency programs
11. Conservation pricing
12. Water conservation coordinator
13. Water waste prohibition
14. Residential ultra-low-flush toilet replacement programs

As signatory to the MOU, the District is responsible for completing and submitting BMP Activity Reports to the CUWCC every two years for each year prior. The District's BMP Activity Report is a comprehensive document that shows implementation of each BMP and provides a determination of implementation from the District's 2000 UWMP. The District has maintained full compliance with all the BMPs to date.

As noted in Section 1.2 of this UWMP, AB 1465 (2010), clarifies that urban water suppliers that are members of the CUWCC and comply with the provisions of the "*Memorandum of Understanding Regarding Urban Water Conservation in California*" dated December 10, 2008, as it may be amended (MOU), may submit their annual reports required under the CUWCC MOU as evidence of compliance without the need for any additional documentation in their UWMPs. With that in mind, Ventura County Waterworks District No. 1's Activity Reports for reporting years 2007-2008 and 2009-2010 are included in Appendix F as evidence of BMP compliance. These reports indicate the District is on track for meeting BMP coverage in its service area according to the MOU.

## **8 WATER SHORTAGE CONTINGENCY PLAN**

### **8.1 INTRODUCTION**

California's extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigates the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multiyear period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

### **8.2 STAGES OF ACTION**

#### ***Ventura County Waterworks District No. 1 Water Shortage Response***

To meet short-term water demand deficiencies, and short- or long-term drought requirements, the District has included a Water Shortage Plan, which is included as Section K of their Rules and Regulations. The District has also adopted permanent water conservation measures included in Section L of their Rules and Regulations. These two sections of the District's rules and regulations are included as Appendix G. In addition, the City of Moorpark which covers the majority of the District has adopted the State of California DWR's Model Water Efficient Landscape Ordinance that set forth standards for landscape irrigation during drought and non-drought times, and acknowledges the constant need to establish long-term water efficiency (City Ordinance 10-383, Chapter 15.23). This ordinance covers all landscaping within new developments as well as rehabilitated landscape.

Provisions of the District's Water Shortage Plan will be implemented in congruence with the policy of Metropolitan and Calleguas' water shortage/drought activities. Calleguas' policy will be based on Metropolitan's adopted Water Surplus and Drought Management Plan (WSDM Plan) as well as Metropolitan's Water Supply Allocation Plan as revised in June 2009. The WSDM Plan is designed to guide management of regional water supplies to achieve reliability goals for Southern California. The Water Supply Allocation Plan is designed to provide a framework for administering an allocation should a water shortage be declared.

In the event of a water shortage, the Director of the Ventura County Public Works Agency (Agency Director) is authorized and directed by to implement provisions of the Water Shortage Plan, subject to ratification by the District Board at its first regularly scheduled meeting.

The Agency Director determines the extent of conservation or water use efficiency required through the implementation and/or termination of particular conservation stages or levels consisting of three levels for the District to prudently plan for and supply water to its customers. However, in the case of local emergencies, the Director of the

Department of Water and Sanitation has the authority to order the implementation of the appropriate stage of water conservation.

### ***Rationing Stages and Reduction Goals***

To meet short-term water demand deficiencies and short- or long-term drought requirements, the District will implement its own water shortage policy in accordance with the District's Water Conservation Program and the policy of Calleguas, which is anticipated to be based on Metropolitan's Water Shortage and Drought Management (WSDM) Plan. The WSDM Plan defines the expected sequence of resource management actions Metropolitan will take during surpluses and shortages of water to minimize the probability of severe shortages that require curtailment of full-service demands. The Calleguas 2010 Regional UWMP details each of the surplus and shortage stages, actions by stage and allocation of supply for M&I demand. In addition, the District can restrict landscape and agricultural irrigation water usage. Mandatory allocations are avoided to the extent practicable, however, in the event of an extreme shortage, an allocation plan will be adopted in accordance with the principles of the WSDM Plan and Metropolitan's Water Supply Allocation Plan.

### ***Metropolitan Water Surplus and Drought Management Plan***

In 1999, Metropolitan in conjunction with its member agencies developed the WSDM Plan.<sup>39</sup> This plan addresses both surplus and shortage contingencies.

The WSDM Plan will guide management of regional water supplies to achieve the reliability goals of Southern California's IRP. The IRP sought to meet long-term supply and reliability goals for future water supply planning. The WSDM Plan's guiding principle is to minimize adverse impacts of water shortage and ensure regional reliability. From this guiding principle come the following supporting principles:

- Encourage efficient water use and economical local resource programs;
- Coordinate operations with member agencies to make as much surplus water as possible available for use in dry years;
- Pursue innovative transfers and banking programs to secure more imported water for use in dry years; and
- Increase public awareness about water supply issues.

The WSDM Plan guides the operations of water resources (local resources, Colorado River, State Water Project, and regional storage) to ensure regional reliability. It identifies the expected sequence of resource management actions Metropolitan will take during surpluses and shortages of water to minimize the probability of severe shortages

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<sup>39</sup> A copy of Metropolitan's WSDM Plan can be found in Appendix A.4 to the agencies November 2010 RUWMP at: [http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP\\_2010.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf)

that require curtailment of full-service demands. Mandatory allocations are avoided to the extent practicable; however, in the event of an extreme shortage Metropolitan's Water Supply Allocation Plan will be implemented.

The WSDM Plan distinguishes between *Surpluses*, *Shortages*, *Severe Shortages*, and *Extreme Shortages*. Within the WSDM Plan, these terms have specific meaning relating to Metropolitan's capability to deliver water to the District as described below:

- **Surplus:** Metropolitan can meet full-service and interruptible program demands, and it can deliver water to local and regional storage.
- **Shortage:** Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.
- **Severe Shortage:** Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation. In a Severe Shortage, Metropolitan may have to curtail Interim Agricultural Water Program (IAWP) deliveries in accordance with IAWP.
- **Extreme Shortage:** Metropolitan must allocate available supply to full-service customers.

The WSDM Plan also defines five surplus management stages and seven shortage management stages to guide resource management activities. Each year, Metropolitan will consider the level of supplies available and the existing levels of water in storage to determine the appropriate management stage for that year. Each stage is associated with specific resource management actions designed to: 1) avoid an Extreme Shortage to the maximum extent possible; and 2) minimize adverse impacts to retail customers should an "Extreme Shortage" occur. The current sequencing outlined in the WSDM Plan reflects anticipated responses based on detailed modeling of Metropolitan's existing and expected resource mix. This sequencing may change as the resource mix evolves.

### ***WSDM Plan Shortage Actions by Shortage Stage***

When Metropolitan must make net withdrawals from storage, it is considered to be in a shortage condition. However, under most of these stages, it is still able to meet all end-use demands for water. The following summaries describe water management actions to be taken under each of the seven shortage stages.

- **Shortage Stage 1** – Metropolitan may make withdrawals from Diamond Valley Lake.
- **Shortage Stage 2** – Metropolitan will continue Shortage Stage 1 actions and may draw from out-of-region groundwater storage.
- **Shortage Stage 3** – Metropolitan will continue Shortage Stage 2 actions and may curtail or temporarily suspend deliveries to Long Term Seasonal and Replenishment Programs in accordance with their discounted rates.

- **Shortage Stage 4** – Metropolitan will continue Shortage Stage 3 actions and may draw from conjunctive use groundwater storage (such as the North Las Posas program) and the SWP terminal reservoirs.
- **Shortage Stage 5** – Metropolitan will continue Shortage Stage 4 actions. Metropolitan’s Board of Directors may call for extraordinary conservation through a coordinated outreach effort and may curtail Interim Agricultural Water Program deliveries in accordance with their discounted rates. In the event of a call for extraordinary conservation, Metropolitan’s Drought Program Officer will coordinate public information activities with member agencies and monitor the effectiveness of ongoing conservation programs. The Drought Program Officer will implement monthly reporting on conservation program activities and progress and will provide quarterly estimates of conservation water savings.
- **Shortage Stage 6** – Metropolitan will continue Shortage Stage 5 actions and may exercise any and all water supply option contracts and/or buy water on the open market either for consumptive use or for delivery to regional storage facilities for use during the shortage.
- **Shortage Stage 7** – Metropolitan will discontinue deliveries to regional storage facilities, except on a regulatory or seasonal basis, continue extraordinary conservation efforts, and implement its Water Supply Allocation Plan.

The overriding goal of the WSDM Plan is to never reach Shortage Stage 7, an Extreme Shortage.

### ***Reliability Modeling of the WSDM Plan***

Using a technique known as “sequentially indexed Monte Carlo simulation,” Metropolitan undertook an extensive analysis of system reservoirs, forecasted demands, and probable hydrologic conditions to estimate the likelihood of reaching each Shortage Stage through 2010. The results of this analysis demonstrated the benefits of coordinated management of regional supply and storage resources. Expected occurrence of a Severe Shortage is four percent or less in most years and never exceeded six percent; equating to an expected shortage occurring once every 17 to 25 years. An Extreme Shortage was avoided in every simulation run.

### ***Metropolitan’s Water Supply Allocation Plan<sup>40</sup>***

Metropolitan adopted its Water Supply Allocation Plan (WSAP) following critically dry conditions affected all of Metropolitan’s main supply sources in 2007. Those dry conditions coupled with a ruling in the Federal Courts in August 2007 providing protective measures for the Delta smelt in the Sacramento-San Joaquin River Delta, brought uncertainty about future pumping operations from the State Water Project.

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<sup>40</sup> Information presented in this section has been extracted from Metropolitan’s Water Supply Allocation Plan, June 2009, a copy of which can be found in Appendix A.4 to the agencies November 2010 RUWMP at: [http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP\\_2010.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf)

Metropolitan's WSAP is described below and was put into effect for the first time in FY 2010 and 2011 calling for an allocation of imported supply to all of Metropolitan's member agencies. Due to the favorable weather conditions brought on by the winter of 2011, Metropolitan's Board of Directors rescinded the allocation on April 12, 2011 following Governor Brown's announcement of the end of California's drought.

Metropolitan worked jointly with the member agency managers and staff to develop a Water Supply Allocation Plan (Plan) to address such needs. The plan that was eventually adopted includes specific formulas for calculating member agency supply allocations and the key implementation elements needed for administering an allocation should a shortage be declared. The adopted allocation formulas seek to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level, and takes into account growth, local investments, changes in supply conditions and the beneficial impacts of non-potable recycled water use and the implementation of conservation savings programs. The adopted formulas are calculated in three steps: (1) base period calculations; (2) allocation year calculations, and (3) supply allocation calculations. These steps are described in further detail below.

- Step 1: Base Period Calculations: The first step in calculating a water supply allocation is to estimate water supply and demand using a historical base period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from the three most recent non-shortage years (base period), which for the 2010 and 2011 allocations were 2004-2006. The calculations take into account various factors including local supplies, wholesale supplies, retail supplies, demands, in-lieu deliveries, agricultural deliveries, conservation achieved and conservation rate structures.
- Step 2: Allocation Year Calculations: The next step in calculating the water supply allocation is estimating water needs in the allocation year. This is done by adjusting the base period estimates of retail demand for population or economic growth and changes in local supplies. A number of factors are taken into consideration in this step including: (1) allocation year retail demands; (2) allocation year local supplies; and (3) allocation year wholesale demands.
- Step 3: Supply Allocation Calculations: The final step is calculating the water supply allocation for each member agency based on the allocation year water needs identified in Step 2. Again, several elements are considered at this stage including: (1) regional shortage levels; (2) regional shortage percentages; (3) extraordinary increased production adjustments; (4) wholesale minimum allocations; (5) maximum retail impact adjustments; (6) interim agricultural water program reductions; (7) conservation demand hardening credits; (8) municipal and industrial allocations; and (9) total allocation

The Allocation Plan takes effect when a regional shortage is declared by Metropolitan's Board of Directors. The allocation period covers twelve consecutive months, from July

of a given year through the following June (this period was selected to minimize the impacts of varying SWP allocations and to provide member agencies with sufficient time to implement their outreach strategies and rate modifications).

The Allocation Plan also allows for an appeals process to address any changes or corrections to an agency's allocation. Appeals can be made to request adjustments for (1) erroneous historical data used in base period calculations; (2) unforeseen loss or gain in local supply; (3) extraordinary increases in local supply; (4) population growth rates; and (5) reviewing calculation of base period, allocation year and supply allocation figures for consistency with the standards outlined in the Allocation Plan.

The Allocation Plan also allows for enforcement through a penalty rate structure. Penalty rates and charges will only be assessed to the extent that an agency's total annual usage exceeds its total annual allocation. Any funds collected will be applied towards investments in conservation and local resources development within the service area of the member agency by which the penalties are incurred. No billing or assessment of penalty rates will take place until the end of the twelve-month allocation period.

Additional information on Metropolitan's Water Supply Allocation Plan can be found in that document as previously referenced by footnote.

### ***Health and Safety Requirements***

The primary goal of the District's water system is to preserve the health and safety of its personnel and the public. Meeting this goal is a continuous function of the system – before, during and after a disaster or water shortage. Fire suppression capabilities will continue to be maintained during any water shortage contingency stage. Some water needs are more immediate than others. The following list of public health needs and the allowable time without potable water is a guideline and will depend on the magnitude of the water shortage:

- Hospitals – continuous need
- Emergency shelters – immediate need
- Kidney dialysis – 24 hours
- Drinking water – 72 hours
- Personal hygiene, waste disposal – 72 hours

Based on commonly accepted estimates of interior residential water use in the United States, Table 8.2-1 indicates per capita health and safety water requirements. During the initial stage of a shortage, customers may adjust either interior and/or outdoor water use to meet the voluntary water reduction goal.

**Table 8.2-1**  
**Per Capita Health and Safety Water Quantity Calculations**

	Non-Conserving Fixtures		Habit Changes <sup>[1]</sup>		Conserving Fixtures <sup>[2]</sup>	
Toilet	5 flushes x 5.5 gpf	27.5	3 flushes x 5.5 gpf	16.5	5 flushes x 1.6 gpf	8.0
Shower	5 min. x 4.0 gpm	20.0	4 min. x 3.0 gpm	12.0	4 min. x 2.5 gpm	10.0
Washer	12.5 gpcd	12.5	11.5 gpcd	11.5	11.5 gpcd	11.5
Kitchen	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Other	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Total		68.0		48.0		37.5
CCF per capita per year		33.0		23.0		18.0

gpcd = gallons per capita per day

gpf = gallons per flush

gpm = gallons per minute

CCF = hundred cubic feet (approximately 748 gallons)

<sup>[1]</sup> Reduced shower use results from shorter and reduced flow. Reduced washer use results from fuller loads.

<sup>[2]</sup> Fixtures include ULF 1.6 gpf toilets, 2.5 gpm showerheads, and efficient clothes washers.

### **Priority by Use**

Conditions prevailing in the District service area require that available water resources be put to maximum beneficial use to the extent possible. The waste, unreasonable use, or unreasonable method of use, of water should be prevented and water conservation and water use efficiency should be encouraged with a view toward maximizing reasonable and beneficial use thereof in the interests of the people of the District and for the public welfare. Preservation of health and safety will be a top priority for the District.

## **8.3 ESTIMATE OF MINIMUM SUPPLY FOR NEXT THREE YEARS**

Metropolitan projects 100 percent reliability for full-service demands from 2015 through the year 2035, as does Calleguas. However, Metropolitan did not make projections for 2010 in their 2010 RUWMP and therefore Calleguas assumed a worst case scenario in interpolating supply for the next three years. Calleguas assumed the current drought would persist through 2013, resulting in Metropolitan import allocations similar to 2009.<sup>41</sup> The drought has officially been declared over and Metropolitan has rescinded its allocations, so this assumption is not valid. However, this worst case scenario resulted in import shortages of 9, 10 and 10% over the next three-year period, respectively for Calleguas in their 2010 UWMP. Using these very conservative assumptions (and really non-realistic, since the drought and allocations are over), the District would have a deficit in imported supply through the next three years as shown in Table 8.3-1. The biggest deficit is 1,389 AFY in 2011, which could be met by reducing demands through water

<sup>41</sup> Calleguas Municipal Water District Final UWMP, Table 6-3, p. 6-4, May 2011.



allocations as was accomplished in FY 2010 where demands were reduced to 11,714 AFY from the previous three years when demands were over 13,000 AFY each year. Additionally, groundwater over and above the District's allocation could be pumped using FCGMA credits.

**Table 8.3-1**  
**Three Year Estimated Minimum Water Supply**  
**(Based on Driest 3-Year Historic Sequence, AFY)**

	2011	2012	2013
Recycled Water <sup>[1]</sup>	450	1,100	1,100
Recovered Groundwater <sup>[2]</sup>	0	0	0
Potable Groundwater	2,240	2,240	2,240
Import Supply Available <sup>[3]</sup>	9,511	9,407	9,407
<b>Total District Supply</b>	<b>12,201</b>	<b>12,747</b>	<b>12,747</b>
<b>Total District Demand <sup>[4]</sup></b>	<b>13,590</b>	<b>13,733</b>	<b>13,876</b>
<b>Surplus</b>	<b>-1,389</b>	<b>-986</b>	<b>-1,129</b>

[1] Recycled water expansion on line by 2012

[2] Moorpark Desalter not on line until 2015

[3] Import supply available assumes 9, 10, and 10 percent reduction for next three years from 2010 import supply shown for VCWWD No. 1 in Calleguas 2010 UWMP, Appendix C, per Table 6-3 in Calleguas 2010 UWMP.

[4] Demand interpolated from projected Normal Year Demand between 2010 of 13,447 AFY and 2015 demand for Normal Year from Table 5.2-1.

The District relies on groundwater wells accessing the Las Posas groundwater basin managed by FCGMA and imported water from Metropolitan through Calleguas. Both sources of water are vitally important to the District. Calleguas and FCGMA are implementing water supply alternative strategies for the region and on behalf of its member agencies to insure available water in the future and during shortages. The District can pump more than the allotted amount during shortage or emergencies, using credits, as noted above.

Supplemental water supplies are discussed in Section 4, Water Reliability Planning. Supplies discussed include regionally beneficial programs, including management of water system pressures and peak demands, water exchanges or transfers, conjunctive use programs, recycled water projects and desalination. These options include programs for expanded local supplies. Additional actions to manage limited supplies would include both operational and demand management measures, encompassing alternative rate structures, distribution of water use efficiency devices, and enhanced school education and public information.

The Calleguas 2010 Regional UWMP further discusses programs by Calleguas, FCGMA and Metropolitan for the benefit of the region and its member agencies, including the Ventura County Waterworks District No. 1.

## **8.4 CATASTROPHIC SUPPLY INTERRUPTION PLAN**

### ***Water Shortage Emergency Response***

A water shortage emergency could be the result of a catastrophic event such as result of drought, failures of transmission facilities, a regional power outage, earthquake, flooding, supply contamination from chemical spills, or other adverse conditions. These emergencies and the District's method for handling them are described below.

#### ***8.4.1 Earthquakes or Other Natural Disasters***

The District is located in an earthquake zone. In the event of an earthquake or natural disaster, the District has the potential of losing its imported water supply. If such a loss occurs, the District could temporarily increase its groundwater production using FCGMA credits to meet water demand until the damage was repaired and the supply restored. In the event of a prolonged loss of imported water, the District could implement their established Water Shortage Plan from the Rules and Regulations to substantially reduce demands until supply is restored, as discussed below.

#### ***8.4.2 Contamination***

Contamination of water supply can result from a number of different events including a water main break, cross-connection condition, water source pollution, or covert action. Water supplies for the District are generally of good quality and no foreseeable permanent contamination issues are anticipated. In the event of a toxic spill or major contamination, the District would isolate the problem and reduce the impact to the water supply. Once the problem has been isolated, the contamination would be cleaned up using chlorination or other necessary procedures and the water supply returned to service as soon as possible. In the meantime, GMA credits or alternative supply would be utilized to meet demand. Implementation of additional demand management measures could also be utilized if the outage is anticipated to be of longer duration.

#### ***8.4.3 Emergency Power Outage***

In the event of a regional power outage, the District would follow the procedures outlined in their Emergency Procedures Manual (EPM) Section VII. The District's EPM identifies various levels of emergencies and provides examples of actions for a number of given emergencies, including power failure. Standby generators are available at each of the District's well and pump station sites to maintain operation should an interruption of power occur. Section IX of the EPM lists all of the stationary and mobile generators located at the various District facilities, with model numbers, kilowatt rating, and fuel tank capacity. In addition, the District would implement the procedures outlined in the Rules and Regulations regarding water shortages (see Appendix G) which includes actions for any event which results in loss of supply.

## **8.5 PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS**

As part of the District's Water Shortage Plan in the District's Rules and Regulations, water use restrictions are set forth in Part 1 - Section K, and penalties imposed for violation are described in Section L, of the District's Rules and Regulations as included in Appendix G.

The District will follow the allocation plan guidelines of Metropolitan as adopted by Calleguas once an extreme shortage is declared. This allocation plan will be enforced by Metropolitan as set forth in their Water Supply Allocation Plan. Calleguas will follow the guidelines of the allocation plan and impose any surcharges that Metropolitan applies to its member agencies that exceed their water allocation, as set forth in the plan, as required to enforce consumption reductions up to a 50% reduction in water supply. The District would correspondingly impose surcharges or penalties in accordance with its ordinance on excessive use of water.

## **8.6 REVENUE AND EXPENDITURE IMPACTS AND MEASURES TO OVERCOME THOSE IMPACTS**

The District receives water revenue from a commodity charge and a fixed service charge. The rates have been designed to recover the bulk of the cost of water service in the commodity charge. An assessment of the revenue impacts as a result of the various stages of conservation previously showed that with the use of the Rate Stabilization Fund, the District would have sufficient funds to cover a water shortage without the need to increase water rates. This was proved out over the past few years. However, the Rate Stabilization Fund has been depleted due to the last few years of substantially lower water use. With the Metropolitan mandatory allocation lifted and water rate increases, the Rate Stabilization Fund should be reconstituted.

## **8.7 WATER SHORTAGE CONTINGENCY ORDINANCE**

As discussed previously, the District's Rules and Regulations and Permanent Water Conservation Measures included in Appendix G. In addition, the City of Moorpark and the County of Ventura have adopted Water Efficient Landscaping Ordinances, which can also be referenced for new and conversion of landscape areas.

## **8.8 MECHANISMS TO DETERMINE REDUCTIONS IN WATER USE**

Under normal conditions, potable water production figures are recorded daily. Weekly and monthly reports are prepared and monitored. This data will be used to measure the effectiveness of any water shortage contingency stage that may be implemented.

As stages of water shortage are declared by Metropolitan and Calleguas, the District will follow implementation of those stages and continue to monitor water demand levels. It is not until Shortage Stage 5 that Metropolitan may call for extraordinary conservation. During this stage, Metropolitan's Drought Program Officer will coordinate public information activities with Calleguas and monitor the effectiveness of ongoing conservation programs. Monthly reporting on estimated conservation water savings will be provided.

The District will participate in member agency manager meetings with Calleguas to monitor and discuss water allocation charts. This will enable the District to be aware of imported water use on a timely basis.

During Metropolitan's fiscal year 2009-10 and 2010-11 a Level 2 Water Supply Allocation Plan was in effect until April 2011 when it was rescinded, which in essence called for reduction levels of 15 percent in water use by its member agencies. Metropolitan's fiscal year commences July 1 and ends June 30. These allocations were passed on by Calleguas and during FY 2009/10 the District reduced its demand by 12.4 percent of FY 2008/09 use, which was well below the required 15 percent reduction from the 3-year baseline period. Therefore, the District has responded favorably to these allocation requirements, which indicates they are effective in making water supplies last during extended drought periods.

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## **9 WATER RECYCLING**

### **9.1 RECYCLED WATER IN SOUTHERN CALIFORNIA**

The Southern California region, from Ventura to San Diego, discharges over 1 billion gallons (1.1 million AFY) of treated wastewater to the ocean each day. These discharges represent a potentially reliable and drought-proof water source, which if treated appropriately and utilized for irrigation and other purposes, could greatly reduce the region's and the District's reliance on imported water. As technological improvements continue to reduce treatment costs, and as public perception and acceptance continue to improve, numerous reuse opportunities may surface in the coming years. Recycled water is already a critical component of the California water picture and should continue to be so in future years because it is not subject to drought induced cutbacks.

### **9.2 COORDINATION OF RECYCLED WATER IN THE DISTRICT SERVICE AREA**

Currently, the District serves directly applied recycled water from its Moorpark Wastewater Treatment Plant in the amount of approximately 450 AFY to the Moorpark Country Club Golf Course area for M&I purposes. In 2012 an expansion of this system will increase production and delivery of tertiary treated wastewater effluent to additional irrigation customers in the Moorpark Country Club as well as to agricultural irrigation customers in the area.

### **9.3 WASTEWATER COLLECTION AND TREATMENT IN THE DISTRICT SERVICE AREA**

Wastewater from the District's water service area is collected and treated by the Wastewater Division of the District. The District operates and maintains the localized sewer collection pipelines and trunk sewers, primarily in the City of Moorpark, that feed into Moorpark Wastewater Treatment Facility.

#### ***Moorpark Wastewater Treatment Plant***

As previously noted, the District's Moorpark Wastewater Treatment Plant is located along Highway 118 just west of the Moorpark city limits. The plant provides advanced primary and secondary treatment for disposal to percolation ponds as well as tertiary treatment for recycled water effluent. In 2010, the plant had an average inflow of 2.21 mgd and supplied average flows of 0.34 mgd of recycled water for landscape irrigation and 1.87 mgd for percolation and eventual groundwater recharge. As mentioned previously, this treatment facility has a total capacity of 5.0 mgd and a tertiary capacity of 1.5 mgd.

#### **9.4 POTENTIAL USES OF RECYCLED WATER**

The District recognizes the potential uses of recycled water in its community, such as large landscaped areas including homeowner's associations and city medians, parks, schoolyards, industrial and other uses. Because of this recognition, the District is currently implementing an expansion of its recycled water system to serve additional landscape irrigation demands within the Moorpark Country Club Estates community including nurseries, homeowner's associations and city medians, as well as its first agricultural irrigation customers.

#### **9.5 PROJECTED AND POTENTIAL USES OF RECYCLED WATER**

The District's 2005 UWMP projected that by 2010 surplus recycled water would be available from Simi Valley in the amount of approximately 1.180 AFY and the Moorpark Wastewater Treatment Plant would be providing approximately 2,000 AFY. All recycled water from Simi Valley, over and above the flow necessary to meet downstream watershed requirements, is being utilized upstream from the District. Also, expansion of the Moorpark Treatment system has been cut back to a more conservative 1,100 AFY and will be available by 2012 as opposed to the original plan of 2010 projected back in the 2005 UWMP. A future expansion of the recycled water distribution system to serve an additional 500 AFY bringing the total to 1,600 AFY is in the preliminary planning stages and conservatively envisioned to come on line between 2015 and 2020.

#### **9.6 ENCOURAGING RECYCLED WATER USE**

Studies of water recycling opportunities within southern California provide a context for promoting the development of water recycling plans. It is recognized that broad public acceptance of recycled water requires continued education and public involvement. However, planning for most of the recycled water available is being directed toward replenishment of the Basin and improvements in groundwater quality.

##### ***Public Education***

The District continues to participate in Calleguas' public education and school education programs, which include extensive learning programs on water recycling. Calleguas' water use efficiency public information programs are a partnership with agencies throughout the county.

Calleguas staff reaches out to area residents including those in the District, through a variety of public information programs. These programs include information on present and future water supplies, demands for a suitable quantity and quality of water, including recycled water, and the importance of implementing water efficient techniques and behaviors. Through Calleguas, water education programs have reached thousands of students with grade-specific programs that include information on recycled water.

Over the past five years, District staff has reached an estimated approximately 30,000 students, including the Annual Student Art Competition, School Presentations, Traveling

Art Exhibit, and Award Ceremonies. The District has also been distributing materials to students during Country Days, a local community fair for the residents of the Moorpark area. The District has been attending this event since 2007 with estimated attendance of around 4,000 per year.

### **Financial Incentives**

The implementation of recycled water projects involves a substantial upfront capital investment for planning studies, environmental impact reports, engineering design and construction before there is any recycled water to market. For some water agencies, these capital costs exceed the short-term expense of purchasing additional imported water supplies from Metropolitan.

The establishment of new supplemental funding sources through federal, state and regional programs now provide significant financial incentives for local agencies to develop and make use of recycled water. Potential sources of funding include federal, state and local funding opportunities. These funding sources include the USBR, California Proposition 13 Water Bond, and Metropolitan's Local Resources Program. These funding opportunities may be sought by the District or possibly more appropriately by regional agencies. The District will continue to support seeking funding for regional water recycling projects and programs.

## **9.7 OPTIMIZING RECYCLED WATER USE**

In Ventura County, the majority of recycled water is used for recharging the Basin, irrigating golf courses, parks, schools, business and communal landscaping. However, future recycled water use can increase by requiring dual piping in new developments, retrofitting existing landscaped areas and constructing recycled water pumping stations and transmission mains to reach areas far from the treatment plants. Gains in implementing some of these projects have been made throughout the county; however, the additional costs, large energy requirements and required infrastructure, make such projects very expensive to pursue.

To optimize the use of recycled water, cost/benefit analysis must be conducted for each potential project. Once again, this brings discussion about the technical and economic feasibility of a recycled water project, which in turn, requires a relative comparison to alternative water supply options. For the District, analysis has shown capital costs exceed the short-term expense of purchasing additional imported water supplies from Metropolitan. Except for the current planned expansion of the recycled water system that will provide up to 1,100 AFY by 2012 and a future expansion up to 1,600 by 2020, it is not anticipated that additional direct reuse projects will be pursued by the District and are, therefore, not included in future supply projections.

The District will continue to conduct cost/benefit analysis when feasible for recycled water projects, and seek creative solutions and a balance to recycled water use, in coordination with Calleguas, Metropolitan and other cooperative agencies. These include



solutions for funding, regulatory requirements, institutional arrangements and public acceptance.

# **APPENDICES**

## **Appendix A**

### **Urban Water Management Plan Act as Amended**

# CALIFORNIA WATER CODE DIVISION 6

## PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	<a href="#">10610-10610.4</a>
CHAPTER 2.	DEFINITIONS	<a href="#">10611-10617</a>
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	<a href="#">10620-10621</a>
Article 2.	Contents of Plans	<a href="#">10630-10634</a>
Article 2.5.	Water Service Reliability	<a href="#">10635</a>
Article 3.	Adoption and Implementation of Plans	<a href="#">10640-10645</a>
CHAPTER 4.	MISCELLANEOUS PROVISIONS	<a href="#">10650-10656</a>

### WATER CODE

#### SECTION 10610-10610.4

**10610.** This part shall be known and may be cited as the "Urban Water Management Planning Act."

**10610.2.** (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

**10610.4.** The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

## **WATER CODE**

### **SECTION 10611-10617**

**10611.** Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

**10611.5.** "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

**10612.** "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

**10613.** "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

**10614.** "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

**10615.** "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

**10616.** "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

**10616.5.** "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

**10617.** "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

## **WATER CODE**

### **SECTION 10620-10621**

**10620.** (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

**10621.** (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

## **WATER CODE**

### **SECTION 10630-10634**

**10630.** It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

**10631.** A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.



- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.
- (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
- (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
  - (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
  - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
  - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
  - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

**10631.1.** (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

**10631.5.** (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

**10631.7.** The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

**10632.** (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic

sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

(8) A draft water shortage contingency resolution or ordinance.

(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

**10633.** The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

**10634.** The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

## **WATER CODE**

### **SECTION 10635**

**10635.** (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

## **WATER CODE**

### **SECTION 10640-10645**

**10640.** Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

**10641.** An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

**10642.** Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

**10643.** An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

**10644.** (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

**10645.** Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.



## **WATER CODE**

### **SECTION 10650-10656**

**10650.** Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

**10651.** In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

**10652.** The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

**10653.** The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

**10654.** An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

**10655.** If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

**10656.** An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

## **Senate Bill No. 7**

### **CHAPTER 4**

An act to amend and repeal Section 10631.5 of, to add Part 2.55 (commencing with Section 10608) to Division 6 of, and to repeal and add Part 2.8 (commencing with Section 10800) of Division 6 of, the Water Code, relating to water.

[Approved by Governor November 10, 2009. Filed with  
Secretary of State November 10, 2009.]

#### **LEGISLATIVE COUNSEL'S DIGEST**

SB 7, Steinberg. Water conservation.

(1) Existing law requires the Department of Water Resources to convene an independent technical panel to provide information to the department and the Legislature on new demand management measures, technologies, and approaches. "Demand management measures" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

This bill would require the state to achieve a 20% reduction in urban per capita water use in California by December 31, 2020. The state would be required to make incremental progress towards this goal by reducing per capita water use by at least 10% on or before December 31, 2015. The bill would require each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill would require agricultural water suppliers to implement efficient water management practices. The bill would require the department, in consultation with other state agencies, to develop a single standardized water use reporting form. The bill, with certain exceptions, would provide that urban retail water suppliers, on and after July 1, 2016, and agricultural water suppliers, on and after July 1, 2013, are not eligible for state water grants or loans unless they comply with the water conservation requirements established by the bill. The bill would repeal, on July 1, 2016, an existing requirement that conditions eligibility for certain water management grants or loans to an urban water supplier on the implementation of certain water demand management measures.

(2) Existing law, until January 1, 1993, and thereafter only as specified, requires certain agricultural water suppliers to prepare and adopt water management plans.

This bill would revise existing law relating to agricultural water management planning to require agricultural water suppliers to prepare and adopt agricultural water management plans with specified components on or before December 31, 2012, and update those plans on or before December

31, 2015, and on or before December 31 every 5 years thereafter. An agricultural water supplier that becomes an agricultural water supplier after December 31, 2012, would be required to prepare and adopt an agricultural water management plan within one year after becoming an agricultural water supplier. The agricultural water supplier would be required to notify each city or county within which the supplier provides water supplies with regard to the preparation or review of the plan. The bill would require the agricultural water supplier to submit copies of the plan to the department and other specified entities. The bill would provide that an agricultural water supplier is not eligible for state water grants or loans unless the supplier complies with the water management planning requirements established by the bill.

(3) The bill would take effect only if SB 1 and SB 6 of the 2009–10 7th Extraordinary Session of the Legislature are enacted and become effective.

*The people of the State of California do enact as follows:*

SECTION 1. Part 2.55 (commencing with Section 10608) is added to Division 6 of the Water Code, to read:

#### PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION

##### CHAPTER 1. GENERAL DECLARATIONS AND POLICY

10608. The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an

administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

## CHAPTER 2. DEFINITIONS

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(b) "Base daily per capita water use" means any of the following:

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of

a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

(c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(d) "Commercial water user" means a water user that provides or distributes a product or service.

(e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

(f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.

(g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into long-term storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

(h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

(i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.

(l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and

water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

(m) “Recycled water” means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:

(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:

(A) Metered.

(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.

(C) Treated to a minimum tertiary level.

(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.

(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

(n) “Regional water resources management” means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

(o) “Reporting period” means the years for which an urban retail water supplier reports compliance with the urban water use targets.

(p) “Urban retail water supplier” means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

(q) “Urban water use target” means the urban retail water supplier’s targeted future daily per capita water use.

(r) “Urban wholesale water supplier,” means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

### CHAPTER 3. URBAN RETAIL WATER SUPPLIERS

10608.16. (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.



(b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

10608.20. (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in subdivision (a) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

- (B) Consider population density differences within the state.
  - (C) Provide flexibility to communities and regions in meeting the targets.
  - (D) Consider different levels of per capita water use according to plant water needs in different regions.
  - (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
  - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).
- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan required pursuant to Part 2.6 (commencing with Section 10610) due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
- (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
  - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies

available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j) An urban retail water supplier shall be granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24. (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area, may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

(2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26. (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the United States Department of Defense military installation's requirements under federal Executive Order 13423.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28. (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
- (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
- (3) Through a regional water management group as defined in Section 10537.
- (4) By an integrated regional water management funding area.
- (5) By hydrologic region.
- (6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42. The department shall review the 2015 urban water management plans and report to the Legislature by December 31, 2016, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets in order to achieve

the 20-percent reduction and to reflect updated efficiency information and technology changes.

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

10608.44. Each state agency shall reduce water use on facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

#### CHAPTER 4. AGRICULTURAL WATER SUPPLIERS

10608.48. (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.

(d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.

(e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

(f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

(g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.

(h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

(i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.



## CHAPTER 5. SUSTAINABLE WATER MANAGEMENT

10608.50. (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

- (1) Revisions to the requirements for urban and agricultural water management plans.
- (2) Revisions to the requirements for integrated regional water management plans.
- (3) Revisions to the eligibility for state water management grants and loans.
- (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
- (5) Increased funding for research, feasibility studies, and project construction.
- (6) Expanding technical and educational support for local land use and water management agencies.

(b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

## CHAPTER 6. STANDARDIZED DATA COLLECTION

10608.52. (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

## CHAPTER 7. FUNDING PROVISIONS

10608.56. (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

10608.60. (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the

Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

(b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

#### CHAPTER 8. QUANTIFYING AGRICULTURAL WATER USE EFFICIENCY

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

SEC. 2. Section 10631.5 of the Water Code is amended to read:

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, “not locally cost effective” means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

SEC. 3. Part 2.8 (commencing with Section 10800) of Division 6 of the Water Code is repealed.

SEC. 4. Part 2.8 (commencing with Section 10800) is added to Division 6 of the Water Code, to read:

## PART 2.8. AGRICULTURAL WATER MANAGEMENT PLANNING

### CHAPTER 1. GENERAL DECLARATIONS AND POLICY

10800. This part shall be known and may be cited as the Agricultural Water Management Planning Act.

10801. The Legislature finds and declares all of the following:

- (a) The waters of the state are a limited and renewable resource.
- (b) The California Constitution requires that water in the state be used in a reasonable and beneficial manner.
- (c) Urban water districts are required to adopt water management plans.

(d) The conservation of agricultural water supplies is of great statewide concern.

(e) There is a great amount of reuse of delivered water, both inside and outside the water service areas.

(f) Significant noncrop beneficial uses are associated with agricultural water use, including streamflows and wildlife habitat.

(g) Significant opportunities exist in some areas, through improved irrigation water management, to conserve water or to reduce the quantity of highly saline or toxic drainage water.

(h) Changes in water management practices should be carefully planned and implemented to minimize adverse effects on other beneficial uses currently being served.

(i) Agricultural water suppliers that receive water from the federal Central Valley Project are required by federal law to prepare and implement water conservation plans.

(j) Agricultural water users applying for a permit to appropriate water from the board are required to prepare and implement water conservation plans.

10802. The Legislature finds and declares that all of the following are the policies of the state:

(a) The conservation of water shall be pursued actively to protect both the people of the state and the state's water resources.

(b) The conservation of agricultural water supplies shall be an important criterion in public decisions with regard to water.

(c) Agricultural water suppliers shall be required to prepare water management plans to achieve conservation of water.

## CHAPTER 2. DEFINITIONS

10810. Unless the context otherwise requires, the definitions set forth in this chapter govern the construction of this part.

10811. "Agricultural water management plan" or "plan" means an agricultural water management plan prepared pursuant to this part.

10812. "Agricultural water supplier" has the same meaning as defined in Section 10608.12.

10813. "Customer" means a purchaser of water from a water supplier who uses water for agricultural purposes.

10814. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of that entity.

10815. "Public agency" means any city, county, city and county, special district, or other public entity.

10816. "Urban water supplier" has the same meaning as set forth in Section 10617.

10817. “Water conservation” means the efficient management of water resources for beneficial uses, preventing waste, or accomplishing additional benefits with the same amount of water.

### CHAPTER 3. AGRICULTURAL WATER MANAGEMENT PLANS

#### Article 1. General Provisions

10820. (a) An agricultural water supplier shall prepare and adopt an agricultural water management plan in the manner set forth in this chapter on or before December 31, 2012, and shall update that plan on December 31, 2015, and on or before December 31 every five years thereafter.

(b) Every supplier that becomes an agricultural water supplier after December 31, 2012, shall prepare and adopt an agricultural water management plan within one year after the date it has become an agricultural water supplier.

(c) A water supplier that indirectly provides water to customers for agricultural purposes shall not prepare a plan pursuant to this part without the consent of each agricultural water supplier that directly provides that water to its customers.

10821. (a) An agricultural water supplier required to prepare a plan pursuant to this part shall notify each city or county within which the supplier provides water supplies that the agricultural water supplier will be preparing the plan or reviewing the plan and considering amendments or changes to the plan. The agricultural water supplier may consult with, and obtain comments from, each city or county that receives notice pursuant to this subdivision.

(b) The amendments to, or changes in, the plan shall be adopted and submitted in the manner set forth in Article 3 (commencing with Section 10840).

#### Article 2. Contents of Plans

10825. (a) It is the intent of the Legislature in enacting this part to allow levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

(b) This part does not require the implementation of water conservation programs or practices that are not locally cost effective.

10826. An agricultural water management plan shall be adopted in accordance with this chapter. The plan shall do all of the following:

(a) Describe the agricultural water supplier and the service area, including all of the following:

- (1) Size of the service area.
- (2) Location of the service area and its water management facilities.
- (3) Terrain and soils.
- (4) Climate.

- (5) Operating rules and regulations.
- (6) Water delivery measurements or calculations.
- (7) Water rate schedules and billing.
- (8) Water shortage allocation policies.
- (b) Describe the quantity and quality of water resources of the agricultural water supplier, including all of the following:
  - (1) Surface water supply.
  - (2) Groundwater supply.
  - (3) Other water supplies.
  - (4) Source water quality monitoring practices.
  - (5) Water uses within the agricultural water supplier's service area, including all of the following:
    - (A) Agricultural.
    - (B) Environmental.
    - (C) Recreational.
    - (D) Municipal and industrial.
    - (E) Groundwater recharge.
    - (F) Transfers and exchanges.
    - (G) Other water uses.
  - (6) Drainage from the water supplier's service area.
  - (7) Water accounting, including all of the following:
    - (A) Quantifying the water supplier's water supplies.
    - (B) Tabulating water uses.
    - (C) Overall water budget.
  - (8) Water supply reliability.
- (c) Include an analysis, based on available information, of the effect of climate change on future water supplies.
- (d) Describe previous water management activities.
- (e) Include in the plan the water use efficiency information required pursuant to Section 10608.48.

10827. Agricultural water suppliers that are members of the Agricultural Water Management Council, and that submit water management plans to that council in accordance with the "Memorandum of Understanding Regarding Efficient Water Management Practices By Agricultural Water Suppliers In California," dated January 1, 1999, may submit the water management plans identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of Section 10826.

10828. (a) Agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, may submit those water conservation plans to satisfy the requirements of Section 10826, if both of the following apply:

- (1) The agricultural water supplier has adopted and submitted the water conservation plan to the United States Bureau of Reclamation within the previous four years.



(2) The United States Bureau of Reclamation has accepted the water conservation plan as adequate.

(b) This part does not require agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, to prepare and adopt water conservation plans according to a schedule that is different from that required by the United States Bureau of Reclamation.

10829. An agricultural water supplier may satisfy the requirements of this part by adopting an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) or by participation in areawide, regional, watershed, or basinwide water management planning if those plans meet or exceed the requirements of this part.

### Article 3. Adoption and Implementation of Plans

10840. Every agricultural water supplier shall prepare its plan pursuant to Article 2 (commencing with Section 10825).

10841. Prior to adopting a plan, the agricultural water supplier shall make the proposed plan available for public inspection, and shall hold a public hearing on the plan. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned agricultural water supplier pursuant to Section 6066 of the Government Code. A privately owned agricultural water supplier shall provide an equivalent notice within its service area and shall provide a reasonably equivalent opportunity that would otherwise be afforded through a public hearing process for interested parties to provide input on the plan. After the hearing, the plan shall be adopted as prepared or as modified during or after the hearing.

10842. An agricultural water supplier shall implement the plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan, as determined by the governing body of the agricultural water supplier.

10843. (a) An agricultural water supplier shall submit to the entities identified in subdivision (b) a copy of its plan no later than 30 days after the adoption of the plan. Copies of amendments or changes to the plans shall be submitted to the entities identified in subdivision (b) within 30 days after the adoption of the amendments or changes.

(b) An agricultural water supplier shall submit a copy of its plan and amendments or changes to the plan to each of the following entities:

- (1) The department.
- (2) Any city, county, or city and county within which the agricultural water supplier provides water supplies.
- (3) Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies.
- (4) Any urban water supplier within which jurisdiction the agricultural water supplier provides water supplies.

(5) Any city or county library within which jurisdiction the agricultural water supplier provides water supplies.

(6) The California State Library.

(7) Any local agency formation commission serving a county within which the agricultural water supplier provides water supplies.

10844. (a) Not later than 30 days after the date of adopting its plan, the agricultural water supplier shall make the plan available for public review on the agricultural water supplier's Internet Web site.

(b) An agricultural water supplier that does not have an Internet Web site shall submit to the department, not later than 30 days after the date of adopting its plan, a copy of the adopted plan in an electronic format. The department shall make the plan available for public review on the department's Internet Web site.

10845. (a) The department shall prepare and submit to the Legislature, on or before December 31, 2013, and thereafter in the years ending in six and years ending in one, a report summarizing the status of the plans adopted pursuant to this part.

(b) The report prepared by the department shall identify the outstanding elements of any plan adopted pursuant to this part. The report shall include an evaluation of the effectiveness of this part in promoting efficient agricultural water management practices and recommendations relating to proposed changes to this part, as appropriate.

(c) The department shall provide a copy of the report to each agricultural water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearing designed to consider the effectiveness of plans submitted pursuant to this part.

(d) This section does not authorize the department, in preparing the report, to approve, disapprove, or critique individual plans submitted pursuant to this part.

#### CHAPTER 4. MISCELLANEOUS PROVISIONS

10850. (a) Any action or proceeding to attack, review, set aside, void, or annul the acts or decisions of an agricultural water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(1) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(2) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 120 days after submitting the plan or amendments to the plan to entities in accordance with Section 10844 or the taking of that action.

(b) In an action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an agricultural water supplier, on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse

of discretion is established if the agricultural water supplier has not proceeded in a manner required by law, or if the action by the agricultural water supplier is not supported by substantial evidence.

10851. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part. This part does not exempt projects for implementation of the plan or for expanded or additional water supplies from the California Environmental Quality Act.

10852. An agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

10853. No agricultural water supplier that provides water to less than 25,000 irrigated acres, excluding recycled water, shall be required to implement the requirements of this part or Part 2.55 (commencing with Section 10608) unless sufficient funding has specifically been provided to that water supplier for these purposes.

SEC. 5. This act shall take effect only if Senate Bill 1 and Senate Bill 6 of the 2009–10 Seventh Extraordinary Session of the Legislature are enacted and become effective.

## **Appendix B**

### **DWR UWMP Checklist Organized by Subject**

**Table I-2 Urban Water Management Plan checklist, organized by subject**

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
<b>PLAN PREPARATION</b>				
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1, Pg. 5-7
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1, Pg. 5-6 and Appendix C
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1, Pg. 2-4 and Appendix C
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1, Pg. 4
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Appendix C
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1, Pg. 4 and Appendix C
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642	What is the difference between item 7 and 58	Section 1, Pg. 4
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1, Pg. 6-7

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Section 1, Pg. 4
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1, Pg. 4
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 1, Pg. 7
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 1, Pg. 8-9
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 1, Pg. 9
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 1, Pg. 9
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 1, Pg. 9
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 5, Pg. 1 and Appendix E
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Appendix C Public Hearing held on June 28, 2011

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Section 5, Pg. 5
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 6, Pg. 1
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 5, Pg. 1-5
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 5, Pg. 5-6
<b>SYSTEM SUPPLIES</b>				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 2, Pg. 6
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 2, Pg. 4-6
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Section 2, Pg. 4 and Appendix H
16	Describe the groundwater basin.	10631(b)(2)		Section 2, Pg. 4
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 2, Pg. 4

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate “not applicable” in the UWMP location column.	10631(b)(2)		Not Applicable.
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate “not applicable” in the UWMP location column.	10631(b)(2)		Section 2, Pg. 4
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 1, Pg. 10 and Section 2, Pg. 4-5
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 2, Pg. 4-6
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4, Pg. 10-14
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4, Pg. 23-24
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4, Pg. 33-35
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 9, Pg. 1-3
45	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 9, Pg. 1



No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 9, Pg. 1
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 9, Pg. 1
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 9, Pg. 2
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 9, Pg. 2
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Section 9, Pg 2-3
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Section 9, Pg. 3
<b>WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING <sup>b</sup></b>				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 4, Pg. 23-24 & 33-35
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 5, Pg. 1-5
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 4, Pg. 23-35 and Section 7, Pg. 1-2
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 8, Pg. 1-11

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 8, Pg. 7-8
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 8, Pg. 9
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Section 8, Pg. 10 and Appendix G
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Section 8, Pg. 10 and Appendix G
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 8, Pg. 10 and Appendix G
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Section 8, Pg. 10
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Section 8, Pg. 10 and Appendix G
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 8, Pg. 10-11
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 3, Pg. 1-13

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 5, Pg. 1-4
<b>DEMAND MANAGEMENT MEASURES</b>				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 7, Pg 1-2
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 7, Pg 1-2
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Section 5, Pg. 6-7 and Section 8, Pg. 11
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Appendix F
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Appendix F

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.



## **Appendix C**

### **Notice of Public Hearing and Resolution of Adoption**

# Certificate of Publication

Ad #278680

In Matter of Publication of:

Public Notice

State of California)

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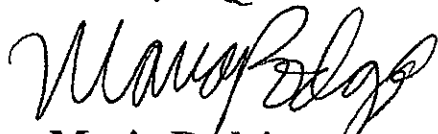
County of Ventura)

I, **Maria Rodriguez**, hereby certify that the **Ventura County Star Newspaper** has been adjudged a newspaper of general circulation by the Superior Court of California, County of Ventura within the provisions of the Government Code of the State of California, printed in the City of Camarillo, for the County of Ventura, State of California; that I am a clerk of the printer of said paper; that the annexed clipping is a true printed copy and publishing in said newspaper on the following dates to wit:

June 14, 21, 2011

I, **Maria Rodriguez** certify under penalty of perjury, that the foregoing is true and correct.

Dated this June 21, 2011, in Camarillo, California, County of Ventura.

  
**Maria Rodriguez**  
(Signature)

**NOTICE OF  
PUBLIC HEARING  
TO RECEIVE PUBLIC  
INPUT ON THE  
DRAFT YEAR 2010  
URBAN WATER  
MANAGEMENT  
PLAN FOR  
VENTURA COUNTY  
WATERWORKS  
DISTRICT NO. 1**

NOTICE IS HEREBY GIVEN that pursuant to Government code section 8066, a hearing will be held June 28, 2011, at 10:00 a.m. in the meeting room of the Board of Supervisors, Administration Building, Government Center, 800 South Victoria Avenue, Ventura, California, concerning the adoption of 2010 Urban Water Management Plan for Ventura County Waterworks District No. 1, (Moorpark).

A copy of the Urban Water Management Plan is available for review at the office of Ventura County Waterworks District No. 1, 6767 Spring Road, Moorpark, California and at the Moorpark Public Library, 699 Moorpark Avenue, Moorpark, California, or can be viewed on the County of Ventura's WEBSITE: [www.Countyofventura.org](http://www.Countyofventura.org)

STEP-by-STEP: Department Listing - Public Works Agency - Water & Sanitation Services - Current Project Information - Look under "Current Projects Feasibility Studies/Reports"

PORTAL/SITE PATH:  
[http://portal.countyofventura.org/portal/page/portal/PUBLIC\\_WORKS/WaterSanitation/currentProjectInformation](http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/WaterSanitation/currentProjectInformation)

At the Public Hearing, any person may appear and be heard regarding the proposal.

Further information can be obtained by calling the Waterworks District No. 1 office at (805) 378-3020  
6/14, 6/21/11  
CNS-2117826#  
VENTURA COUNTY STAR  
Ad No.278680



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**A RESOLUTION OF THE BOARD OF  
VENTURA COUNTY WATERWORKS DISTRICT NO. 1  
ADOPTING THE 2010 URBAN WATER MANAGEMENT PLAN**

WHEREAS, on January 1, 1983, the Urban Water Management Planning Act went into effect requiring preparation and update of Water Management Plans, by urban water purveyors serving a specified number of customers; and

WHEREAS, Ventura County Waterworks District (VCWD) No. 1 is required to comply with the requirements of the Act and must update its 2005 Urban Water Management Plan for its service area; and

WHEREAS, the Board of VCWD No. 1 continues to support water reclamation and conservation activities for VCWD No. 1; and

WHEREAS, the people served by VCWD No. 1 will benefit from the implementation of effective water reclamation and conservation programs that help to ensure a reliable water supply.

NOW, THEREFORE, BE IT RESOLVED that the Board of VCWD No. 1 adopts the 2010 Urban Water Management Plan for VCWD No. 1.

BE IT FURTHER RESOLVED that the Board of VCWD No. 1 declares its intent to continue its support of the water reclamation and conservation activities provided for in the 2010 Urban Water Management Plan for VCWD No. 1.

Upon motion of Supervisor Foy, seconded by Supervisor LONG, and duly carried, the Board hereby adopts the foregoing resolution on the 28th day of JUNE, 2011.

By Linda Parks  
Linda Parks, Chair  
Board of Ventura County  
Waterworks District No. 1

ATTEST: MICHAEL POWERS,  
Clerk of the Board of Supervisors,  
County of Ventura, State of California,

By Paula L. Quinn  
Deputy Clerk of the Board







## **Appendix D**

### **References Used in the Production of this UWMP**

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## **Appendix E**

### **Technical Memorandum on Calculation of SBX7-7 Baseline 2020 Targets for Water Conservation Per Capita Use**

## TECHNICAL MEMORANDUM

To: Cefe Munoz

From: Mike Swan

Date: May 27, 2011

Subject: 20x2020 Baseline Calculation & Water Use Target Method Selection

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According to the Department of Water Resources (DWR), a water supplier must define a continuous 10 or 15 year base period (baseline) for water use ending no earlier than December 31, 2004 and no later than December 31, 2010 that will be used to develop their per capita water use target for the year 2020 and an interim target for 2015. A water supplier who met at least 10 percent of its 2008 measured retail water demand through recycled water may use a 15-year baseline period; otherwise a supplier must use a 10-year baseline. Ventura County Waterworks District No. 1 (District) supplied 469 acre-feet of recycled water in FY 2007/08 out of a total supply of 13,876 acre-feet, which is only 3.4 percent, and as a result must use a 10-year baseline.

*Table 1* shows the gross water use, the population, and the per capita water use of the District's water service area from water years FY 1996 through FY 2010. Groundwater production, imported water and recycled water use comes from production reports furnished by the District and agricultural use is from agricultural meter reads within the system also provided by the District. Population data used herein is from the City of Moorpark and California State Department of Finance (DOF) estimates increased by 3 percent to include the small area of the District outside the City. The most advantageous period for the District to use is the one generating the highest per capita use, making subsequent conservation easier to achieve. Therefore, the 10-year period from FY 1996 through FY 2005 was determined to be the most advantageous and was used to calculate a baseline per capita water use average of 223.2 gallons per capita per day (GPCD) as shown in *Table 1*.



**Table 1**  
**Ventura County Waterworks District No. 1 Base Daily Per Capita Use**

Fiscal Year	Groundwater Production (AFY)	Imported Water (AFY)	Recycled Water (AFY) <sup>[1]</sup>	Agricultural Use (AFY) <sup>[2]</sup>	Gross Water Use <sup>[3]</sup> (AFY)	Gross Water Use (gal/day)	Water Service Area Population <sup>[4]</sup>	Annual /Capita Use (GPCD)
1996	1,401	9,359	0	2,664	8,096	7,227,151	29,387	245.9
1997	133	10,608	0	3,259	7,482	6,679,044	30,541	218.7
1998	1,590	8,074	0	2,314	7,350	6,561,210	31,518	208.2
1999	2,064	8,441	0	3,105	7,400	6,605,844	31,962	206.7
2000	2,315	9,261	0	3,249	8,327	7,433,360	32,357	229.7
2001	817	10,074	0	2,890	8,001	7,142,346	32,803	217.7
2002	1,569	10,969	0	3,669	8,869	7,917,193	34,115	232.1
2003	1,331	10,347	0	2,922	8,756	7,816,320	35,557	219.8
2004	94	13,545	381	3,709	9,549	8,524,217	35,785	238.2
2005	249	11,624	437	2,615	8,821	7,874,345	36,659	214.8
2006	159	11,310	218	2,614	8,637	7,710,091	36,735	209.9
2007	414	12,214	472	3,464	8,692	7,759,189	37,004	209.7
2008	1,493	11,914	469	2,869	10,069	8,988,411	37,716	238.3
2009	2,083	10,534	458	3,040	9,119	8,140,364	38,163	213.3
2010	2,165	9,161	388	2,646	8,292	7,402,116	38,703	191.3
<b>Baseline (Average FY 1996-2005)</b>								223.2
<b>Minimum Baseline (Average FY 2004-2008)</b>								222.2

[1] Recycled Water from Moorpark Wastewater Treatment Plant

[2] Metered Agricultural Water Use

[3] Gross Water Use = Groundwater Production + Imported - Recycled - Agricultural

[4] DOF estimates adjusted to include small area outside City.

A water supplier must set a 2020 water use target and a 2015 interim target using one of the following four methods as defined further in Section 10608.20 of Senate Bill No. 7 (SBX7-7):

- Method 1: Eighty percent of the water supplier's baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscape area water use; and commercial, industrial, and institutional uses
- Method 3: Ninety-five percent of the applicable state hydrologic region target as stated in the State's April 30, 2009, draft 20x2020 Water Conservations Plan
- Method 4: A BMP Option based on standards that are consistent with the California Urban Water Conservation Council's (CUWCC) best management practices (BMPs).

## Calculation of Minimum Targets

If the average base daily per capita water use is greater than 100 GPCD for a defined 5-year baseline period, the legislation's minimum water use reduction requirement must also be met as set in Section 10608.22 of Senate Bill No. 7 SBX7-7.

Per SB7x7, the minimum water use reduction baseline period must end no earlier than December 31, 2007 and no later than December 31, 2010 and the minimum reduction shall be no less than 5 percent of this 5-year base daily per capita water use. A minimum water use reduction baseline period between FY 2004 through 2008 was selected to calculate the most advantageous 5-year minimum water use reduction target. As shown in *Table 1*, the minimum baseline water use averages to 222.2 GPCD. The minimum per capita water use target for 2020 must therefore be 211.1 GPCD (95% of 222.2).

## Calculation of Targets Using Methods 1 – 4

Method 1: Using a baseline per capita average of 223.2 GPCD (shown in Table 1) the Ventura County Waterworks District No. 1 2020 target would be 178.6 GPCD (80% of 223.2). Since the target water use for Method 1 is less than the one found using the legislation's minimum requirement criteria (211.1), no further adjustments to this water use target would be required, if this method is selected.

Method 2: The District does not currently maintain records of lot size, irrigated landscaped area for each parcel, reference evapotranspiration for each parcel, etc. to split its residential, commercial, industrial, or institutional uses into inside and outside (landscape irrigation) uses. The use of Method 2 to calculate conservation targets is therefore not feasible.

Method 3: The Ventura County Waterworks District No. 1 falls within the South Coast Hydrologic Region (Hydrologic Region 4). According to the State's April 30, 2009 draft 20x2020 Water Conservation Plan, the 2020 Target for Hydrologic Region 4 is 149 GPCD. Using Method 3, the District's 2020 water use target would be 141.6 GPCD (95% of 149). Since the target water use for Method 3 is less than the one found using the legislation's minimum requirement criteria (217.5), no further adjustments to this water use target would be required, if this method is selected.

Method 4: DWR recently released this method and a calculator for agencies wishing to use this BMP-based method. Per DWR's alternative 2 procedure, a default indoor residential water savings of 15 GPCD was assumed. Another required component in DWR's Provisional Method 4 calculator is the Commercial, Industrial and Institutional (CII) water use consumption for the mid-point of the baseline period. This was obtained from the District supplied water usage data for year 2004 and was 1,874 AF. The resultant 2020 water use target using DWR's "SBX7-7 Provisional Method 4 Target Calculator" was 181.1 GPCD.

## Conclusion

The discussion and calculations above are summarized in *Table 2*.

**Table 2**  
**Ventura County Waterworks District No. 1**  
**Water Use Target Summary (GPCD)**

Method	2020
1	178.6
2	Not Applicable
3	141.6
4	181.1

As shown in *Table 2*, Method 4 results in the most favorable water use target level for the Ventura County Waterworks District No. 1. The 2015 interim target would then be 202.2 GPCD (mid-point between 223.2 GPCD baseline and 181.1 GPCD 2020 target). It should be noted that the District has never met this 2020 target, but did achieve the interim 2015 goal of 202.2 GPCD in FY 2010. However, FY 2010 was a Metropolitan Water District of Southern California water allocation year due to the drought condition, which was then lifted in April 2011. Therefore, demands for the past two years should not be considered normal. If the District-wide use returns to the average of the three years prior to FY 2009 (FY 2006-2008) of 8.153 million gallons and using existing service area population of 38,703, then the District would be at 211 GPCD which is higher than the 2015 interim target by about 9 GPCD. And there would be substantial additional conservation and/or recycled water conversions needed to reach the 2020 target.

## **Appendix F**

### **CUWCC Best Management Practices Annual Reports, Coverage Reports, and Activity Reports, 2007-2008 and 2009-2010**

Reported as of 12/24/08

**Water Supply & Reuse**

Reporting Unit:

**Ventura County Waterworks Dist. #1**

Year:

**2007****Water Supply Source Information**

Supply Source Name	Quantity (AF) Supplied	Supply Type
Calleguas Municipal Water District	12318.8	Imported
District	1032.6	Groundwater

**Total AF: 13351.4**

Reported as of 12/24/08

**Accounts & Water Use**

Reporting Unit Name:  
**Ventura County Waterworks**  
 Dist. #1

Form Status:  
**100% Complete**

Year:  
**2007**

**A. Service Area Population Information:**

1. Total service area population 36786

**B. Number of Accounts and Water Deliveries (AF)**

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	9436	7922.7	0	0
2. Multi-Family	0	0	0	0
3. Commercial	218	738.5	0	0
4. Industrial	71	249.2	0	0
5. Institutional	142	927.6	0	0
6. Dedicated Irrigation	179	3294.5	0	0
7. Recycled Water	1	481.7	0	0
8. Other	248	54.1	0	0
9. Unaccounted	NA	0	NA	0
<b>Total</b>	<b>10295</b>	<b>13668.3</b>	<b>0</b>	<b>0</b>

**Metered****Unmetered**

Reported as of 12/24/08

## BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:

Ventura County Waterworks Dist.  
#1BMP Form Status:  
100% CompleteYear:  
2007

### A. Implementation

- |  |            |
|--|------------|
| 1. Based on your signed MOU date, 08/27/1991, your Agency STRATEGY DUE DATE is:  | 08/26/1993 |
| 2. Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys? | yes        |
| a. If YES, when was it implemented?  | 01/01/1993 |
| 3. Has your agency developed and implemented a targeting/marketing strategy for MULTI-FAMILY residential water use surveys?  | yes        |
| a. If YES, when was it implemented?  | 01/01/1993 |

### B. Water Survey Data

#### Survey Counts:

	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	0	2
2. Number of surveys completed:	0	2

#### Indoor Survey:

3. Check for leaks, including toilets, faucets and meter checks	yes	yes
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	yes	yes
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary	yes	yes

#### Outdoor Survey:

6. Check irrigation system and timers	yes	yes
7. Review or develop customer irrigation schedule	yes	yes
8. Measure landscaped area (Recommended but not required for surveys)	yes	yes
9. Measure total irrigable area (Recommended but not required for surveys)	yes	yes
10. Which measurement method is typically used (Recommended but not required for surveys)		Other
11. Were customers provided with information packets that included evaluation results and water savings recommendations?	yes	yes
12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?	yes	yes

a. If yes, in what form are surveys tracked? spreadsheet

b. Describe how your agency tracks this information.

We keep records of each survey offered, status of each survey, resultant allocation adjustments.

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**



Reported as of 12/24/08

**BMP 02: Residential Plumbing Retrofit**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2007**

Dist. #1

**A. Implementation**

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no

a. If YES, list local jurisdictions in your service area and code or ordinance in each:

2. Has your agency satisfied the 75% saturation requirement for single-family housing units? yes

3. Estimated percent of single-family households with low-flow showerheads: 85%

4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no

5. Estimated percent of multi-family households with low-flow showerheads: 60%

6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

We keep records of rebates & new development. Percentages calculated as flows - homes built after 1993 = 100% low-flow fixtures. Homes built prior to 1991 rebates low-flow install tracked to get percentage.

**B. Low-Flow Device Distribution Information**

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes

a. If YES, when did your agency begin implementing this strategy? 01/01/1994

b. Describe your targeting/ marketing strategy.

We put a comment on our bills to advertise out "ULFT Toilet Rebate" Program. There is also information regarding available rebates on our website. Gave away low-flow showerheads at our local Country Days event.

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	300	0
3. Number of toilet-displacement devices distributed:	0	0
4. Number of toilet flappers distributed:	2	0
5. Number of faucet aerators distributed:	0	0
6. Does your agency track the distribution and cost of low-flow devices?		yes

a. If YES, in what format are low-flow devices tracked? Spreadsheet

b. If yes, describe your tracking and distribution system :

We keep a database to identify all customers who receive rebates, and the number of rebates(maximum 2) for each customer. This allows us to

determine the number and amount of rebates during any one year. We do not track cost of ULFTs because they are provided through CMWD

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 12/24/08

**BMP 03: System Water Audits, Leak Detection and Repair**

Reporting Unit:

**Ventura County Waterworks Dist.**

BMP Form Status:

**100% Complete**

Year:

**2007**

#1

**A. Implementation**

1. Does your agency own or operate a water distribution system? yes
2. Has your agency completed a pre-screening system audit for this reporting year? yes
3. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF) 13889.7
  - b. Determine other system verifiable uses (AF) 0
  - c. Determine total supply into the system (AF) 13351.4
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 1.04
4. Does your agency keep necessary data on file to verify the values entered in question 3? yes
5. Did your agency complete a full-scale audit during this report year? no
6. Does your agency maintain in-house records of audit results or completed AWWA M36 audit worksheets for the completed audit which could be forwarded to CUWCC? yes
7. Does your agency operate a system leak detection program? yes
  - a. If yes, describe the leak detection program:
 

Purchases and sales are tracked on a monthly basis. We perform system leak detection when our unaccounted water loss >6%, and we repair all leaks when found. O&M staff has regularly scheduled system check. We also monitor unmetered water use, such as water used in flushing and other system maintenance.

**B. Survey Data**

1. Total number of miles of distribution system line. 138
2. Number of miles of distribution system line surveyed. 138

**C. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? yes
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

We compare production vs. consumption to be sure percentage of loss is less than 6%

**D. Comments**

A. Prod 13341.4 b. Usage 13186.6 % less = A-B = 1.2% A

**Voluntary Questions (Not used to calculate compliance)**

**E. Volumes****Estimated****Verified**

1. Volume of raw water supplied to the system:
2. Volume treated water supplied into the system:
3. Volume of water exported from the system:
4. Volume of billed authorized metered consumption:
5. Volume of billed authorized unmetered consumption:
6. Volume of unbilled authorized metered consumption:
7. Volume of unbilled authorized unmetered consumption:

**F. Infrastructure and Hydraulics**

1. System input (source or master meter) volumes metered at the entry to the:
2. How frequently are they tested and calibrated?
3. Length of mains:
4. What % of distribution mains are rigid pipes (metal, ac, concrete)?
5. Number of service connections:
6. What % of service connections are rigid pipes (metal)?
7. Are residential properties fully metered?
8. Are non-residential properties fully metered?
9. Provide an estimate of customer meter under-registration:
10. Average length of customer service line from the main to the point of the meter:
11. Average system pressure:
12. Range of system pressures:

From to

13. What percentage of the system is fed from gravity feed?
14. What percentage of the system is fed by pumping and re-pumping?

**G. Maintenance Questions**

1. Who is responsible for providing, testing, repairing and replacing customer meters?
2. Does your agency test, repair and replace your meters on a regular timed schedule?
  - a. If yes, does your agency test by meter size or customer category?:
    - Less than or equal to 1"
    - 1.5" to 2"
    - 3" and Larger
  - b. If yes to meter size, please provide the frequency of testing by meter size:
  - c. If yes to customer category, provide the frequency of testing by customer category:
    - SF residential

MF residential

Commercial

Industrial &amp; Institutional

3. Who is responsible for repairs to the customer lateral or customer service line?
4. Who is responsible for service line repairs downstream of the customer meter?
5. Does your agency proactively search for leaks using leak survey techniques or does your utility reactively repair leaks which are called in, or both?
6. What is the utility budget breakdown for:

Leak Detection	\$
Leak Repair	\$
Auditing and Water Loss Evaluation	\$
Meter Testing	\$

**H. Comments**

Reported as of 12/24/08

## BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit:

Ventura County Waterworks Dist.  
#1BMP Form Status:  
100% CompleteYear:  
2007

### A. Implementation

1. Does your agency have any unmetered service connections? No
  - a. If YES, has your agency completed a meter retrofit plan?
  - b. If YES, number of previously unmetered accounts fitted with meters during report year:
2. Are all new service connections being metered and billed by volume of use? Yes
3. Are all new service connections being billed volumetrically with meters? Yes
4. Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? No
5. Please fill out the following matrix:

Account Type	Number of Metered Accounts	Number of Metered Accounts Read	Number of Metered Accounts Billed by Volume	Billing Frequency Per Year	Number of Volume Estimates
a. Single Family	9436	9436	9436	6	0
b. Multi-Family	0	0	0	6	0
c. Commercial	218	218	218	6	0
d. Industrial	71	71	71	6	0
e. Institutional	142	142	142	6	0
f. Landscape Irrigation	0	0	0	0	0

### B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? no
  - a. If YES, when was the feasibility study conducted? (mm/dd/yy)
  - b. Describe the feasibility study:
2. Number of CII accounts with mixed-use meters: 301
3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. 0

### C. "At Least As Effective As"

1. Is your agency implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

Reported as of 12/24/08

## BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:

Ventura County

BMP Form Status:

100% Complete

Year:

2007

Waterworks Dist. #1

### A. Water Use Budgets

- |  |     |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts:  | 719 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:                         | 719 |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting year: | 719 |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting year:   | 719 |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle?   | yes |

### B. Landscape Surveys

- |  |            |
|--|------------|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | yes        |
| a. If YES, when did your agency begin implementing this strategy?                    | 01/01/1994 |
| b. Description of marketing / targeting strategy:                                    |            |

District has contracted with a consultant to perform large landscape water audits for high use customers who exceed their allocations. At the time of billing, top water users are identified. Upon review of their accounts, if warranted, these customers are sent applications to request a review of their allocations. If a review of the account history and the information provided in the application suggests above normal water consumption, the customer will be offered a water audit. The audit will help determine the appropriateness of the allocation, and also used to determine methods of water conservation. We also offered a California Friendly Landscape training class to our customers.

- |   |     |
|---|-----|
| 2. Number of Surveys Offered during reporting year.                             | 3   |
| 3. Number of Surveys Completed during reporting year.                           | 0   |
| 4. Indicate which of the following Landscape Elements are part of your survey:  |     |
| a. Irrigation System Check  | yes |
| b. Distribution Uniformity Analysis   | yes |
| c. Review / Develop Irrigation Schedules  | yes |
| d. Measure Landscape Area   | yes |
| e. Measure Total Irrigable Area   | yes |
| f. Provide Customer Report / Information  | yes |
| 5. Do you track survey offers and results?                                      | yes |
| 6. Does your agency provide follow-up surveys for previously completed surveys? | yes |
| a. If YES, describe below:  |     |

We review the water use to confirm efficient water use. If customer continues having a problem being efficient, we offer a follow up audit to determine whether the conservation recommendations have been implemented and to review irrigation schedules.

**C. Other BMP 5 Actions**

1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. yes

Does your agency provide mixed-use accounts with landscape budgets?

2. Number of CII mixed-use accounts with landscape budgets. 23

Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. (From BMP 4 report) 0

Total number of change-outs from mixed-use to dedicated irrigation meters since Base Year.

3. Do you offer landscape irrigation training? yes

4. Does your agency offer financial incentives to improve landscape water use efficiency? no

Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? yes

a. If YES, describe below:

The Ventura County Water Conservation Program coordinated efforts of numerous individuals and agencies on the Water Conservation Landscape Task Force to prepare the Landscape Design Criteria to comply with AB 325, Water Conservation in Landscaping Act. The Ventura County Board of Supervisors and the Board of Directors for the Ventura County Waterworks District No. 1 adopted the criteria in October 1992. The criteria use the water budget approach. We also have a variety of brochures available that detail plant water requirements and preferred irrigation practices, including "Sustainable Landscaping: Resource Efficient Landscape for the Central Coast," "Top Ten Ways to Conserve Water," and the County's "Landscape Design Criteria."

6. Do you have irrigated landscaping at your facilities? yes

a. If yes, is it water-efficient? yes

b. If yes, does it have dedicated irrigation metering? yes

7. Do you provide customer notices at the start of the irrigation season? yes

8. Do you provide customer notices at the end of the irrigation season? yes

**D. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**



Reported as of 12/24/08

**BMP 06: High-Efficiency Washing Machine Rebate Programs**

Reporting Unit:  
**Ventura County Waterworks**  
 Dist. #1

BMP Form Status:  
**100% Complete**

Year:  
**2007**

**A. Coverage Goal**

	Single Family	Multi- Family
1. Number of <b>residential</b> dwelling units in the agency service area.	9,106	0
2. Coverage Goal =	<b>= 699 Points</b>	

**B. Implementation**

1. Does your agency offer rebates for **residential** high-efficiency washers? no

HEW Water Factor	Total Value of Financial Incentives				TOTAL	POINTS AWARDED
	Number of Financial Incentives Issued	Retail Water Agency	Wholesaler/ Grants (if applicable)	Energy Utility (if applicable)		
2. Greater than 8.5 but not exceeding 9.5 (1 point)		\$ 0	\$ 0	\$ 0	\$ 0	
3. Greater than 6.0 but not exceeding 8.5 (2 points)		\$ 0	\$ 0	\$ 0	\$ 0	
4. Less than or equal to 6.0 (3 points)	0	\$ 0	\$ 0	\$ 0	\$ 0	0
<b>TOTALS:</b>	<b>0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>0</b>

**C. Past Credit Points**

For HEW incentives issued before July 1, 2004, select ONE of the following TWO options:

- Method One: Points based on HEW Water Factor
- Method Two: Agency earns 1 point for each HEW.

<b>PAST CREDIT TOTALS:</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>
--------------------------------	----------	-------------	----------

**D. Rebate Program Expenditures**

1. Average or Estimated Administration and Overhead	\$ 0
2. Is the financial incentive offered per HEW at least equal to the marginal benefits of the water savings per HEW?	no

**E. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	no
---	----

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**F. Comments**

Reported as of 12/24/08

**BMP 07: Public Information Programs**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2007****Dist. #1****A. Implementation**

1. How is your public information program implemented?

Wholesaler and retailer both materially participate in program

Which wholesaler(s)?

Wholesaler and retailer both participate in program Metropolitan Water District Calleguas Municipal Water District

2. Describe the program and how it's organized:

Public Information Messages on bills regarding Ultra Low Flush Toilet (ULFT) rebate program (finished in 7/2008) seasonal tiers, conservation tips indoors and outdoors. 2. Brochures regarding water saving tips, waterwise gardening, High Efficiency Toilets and Washers and seed give aways etc. at customer service desk. 3. Gardens at the main entry to our customer service office and in the courtyard were planted with drought-resistant plants and designed to demonstrate the beauty of such plants. 4. "Water Awareness Month" activities including an annual "Water Awareness" poster contest. 5. Bill compares current usage to use during the same time period in the previous year. 6. Annual Water Quality Report 7. Participation in Local Country Days Event, giveaway conservation, educational items, low flow shower heads. 8. Bill inserts on Landscape training classes and conservation reminders.

3. Indicate which and how many of the following activities are included in your public information program:

Public Information Program Activity in Retail Service Area	Yes/No	Number of Events
a. Paid Advertising	no	
b. Public Service Announcement	no	
c. Bill Inserts / Newsletters / Brochures	yes	4
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	0
f. Special Events, Media Events	yes	2
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

**B. Conservation Information Program Expenditures**

1. Annual Expenditures (Excluding Staffing) 3750

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 12/24/08

**BMP 08: School Education Programs**

Reporting Unit:

**Ventura County**

BMP Form Status:

**100% Complete**

Year:

**2007****A. Implementation**

1. How is your public information program implemented?

Wholesaler and retailer both participate in program

Which wholesaler(s)?

MWD

2. Please provide information on your region-wide school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
-------	--	----------------------------	-------------------------	----------------------------

Grades K-3rd	yes	4	200	0
--------------	-----	---	-----	---

Grades 4th-6th	yes	3	550	0
----------------	-----	---	-----	---

Grades 7th-8th	no	0	0	0
----------------	----	---	---	---

High School	no	0	0	0
-------------	----	---	---	---

4. Did your Agency's materials meet state education framework requirements? yes

5. When did your Agency begin implementing this program? 01/01/1994

**B. School Education Program Expenditures**

1. Annual Expenditures (Excluding Staffing) 658.33

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 12/24/08

**BMP 09: Conservation Programs for CII Accounts**

Reporting Unit:

**Ventura County**

BMP Form Status:

**100% Complete**

Year:

**2007****A. Implementation**

1. Has your agency identified and ranked COMMERCIAL customers according to use? yes
2. Has your agency identified and ranked INDUSTRIAL customers according to use? yes
3. Has your agency identified and ranked INSTITUTIONAL customers according to use? yes

**Option A: CII Water Use Survey and Customer Incentives Program**

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? If so, please describe activity during reporting period: no

<b>CII Surveys</b>	<b>Commercial Accounts</b>	<b>Industrial Accounts</b>	<b>Institutional Accounts</b>
a. Number of New Surveys Offered	0	0	0
b. Number of New Surveys Completed	0	0	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0

<b>CII Survey Components</b>	<b>Commercial Accounts</b>	<b>Industrial Accounts</b>	<b>Institutional Accounts</b>
e. Site Visit	no	no	no
f. Evaluation of all water-using apparatus and processes	no	no	no
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	no	no	no

<b>Agency CII Customer Incentives</b>	<b>Budget (\$/Year)</b>	<b># Awarded to Customers</b>	<b>Total \$ Amount Awarded</b>
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

## Option B: CII Conservation Program Targets

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option? no

6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings? no

7. **System Calculated** annual savings (AF/yr):

CII Programs	# Device Installations
a. Ultra Low Flush Toilets	0
b. Dual Flush Toilets	0
c. High Efficiency Toilets	0
d. High Efficiency Urinals	0
e. Non-Water Urinals	0
f. Commercial Clothes Washers (coin-op only; not industrial)	0
g. Cooling Tower Controllers	0
h. Food Steamers	0
i. Ice Machines	0
j. Pre-Rinse Spray Valves	0
k. Steam Sterilizer Retrofits	0
l. X-ray Film Processors	0

8. **Estimated** annual savings (AF/yr) from agency programs not including the devices listed in Option B. 7., above:

CII Programs	Annual Savings (AF/yr)
a. Site-verified actions taken by agency:	0
b. Non-site-verified actions taken by agency:	0

### B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your agency implementing an "at least as effective as" variant of this BMP? yes

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

The District has participated in a Commercial, Industrial, and Institutional (CII) Water Audit Program with Metropolitan Water District and Calleguas Municipal Water District. At that time, the consultants doing the the surveys reviewed our database and determined which customers would benefit from the audits and which audits would most likely be cost effective and result in recommendations to facilitate substantial water savings. Audits were performed for those customers agreeing to participate in the program. Most of these customers have implemented the recommendations made by the consultants. Currently the District offers requests for review of water allocations, which are used to survey

the water use and Best Mangement Practices for the customer. Water audits are also offered to our customers who exceed their allocations or request an audit to help determine more efficient water use and suggest methods of water conservation.

#### **D. Comments**

Reported as of 12/24/08

**BMP 11: Conservation Pricing**

Reporting Unit:

BMP Form

Year:

**Ventura County Waterworks**

Status:

**2007**

Dist. #1

**100% Complete****A. Implementation****Water Service Rate Structure Data by Customer Class****1. Single Family Residential**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 7,011,149
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 1,208,394

**2. Multi-Family Residential**

a. Rate Structure	Service Not Provided
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 0
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0

**3. Commercial**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 688,104
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 126,250

**4. Industrial**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 235,052
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 36,071

**5. Institutional / Government**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 778,072
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 126,250

**6. Dedicated Irrigation (potable)**

a. Rate Structure	Allocation-Based
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 1,775,360
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 306,608

**7. Recycled-Reclaimed**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 279,482
c. Total Revenue from Customer	\$ 4,698



## Meter/Service (Fixed) Charges

**8. Raw**

- |  |                      |
|--|----------------------|
| a. Rate Structure  | Service Not Provided |
| b. Total Revenue from Commodity Charges (Volumetric Rates)   | \$ 0                 |
| c. Total Revenue from Customer Meter/Service (Fixed) Charges | \$ 0                 |

**9. Other**

- |  |                      |
|--|----------------------|
| a. Rate Structure  | Service Not Provided |
| b. Total Revenue from Commodity Charges (Volumetric Rates)   | \$ 0                 |
| c. Total Revenue from Customer Meter/Service (Fixed) Charges | \$ 0                 |

**B. Implementation Options****Select Either Option 1 or Option 2:****1. Option 1: Use Annual Revenue As Reported**

$$V/(V+M) \geq 70\%$$

V = Total annual revenue from volumetric rates

M = Total annual revenue from customer meter/service (fixed) charges

Selected

**2. Option 2: Use Canadian Water & Wastewater Association Rate Design Model**

$$V/(V+M) \geq V'/(V'+M')$$

V = Total annual revenue from volumetric rates

M = Total annual revenue from customer meter/service (fixed) charges

V' = The uniform volume rate based on the signatory's long-run incremental cost of service

M' = The associated meter charge

a. If you selected Option 2, has your agency submitted to the Council a completed Canadian Water & Wastewater Association rate design model?

b. Value for V' (uniform volume rate based on agency's long-run incremental cost of service) as determined by the Canadian Water & Wastewater Association rate design model:

c. Value for M' (meter charge associated with V' uniform volume rate) as determined by the Canadian Water & Wastewater Association rate design model:

**C. Retail Wastewater (Sewer) Rate Structure Data by Customer Class**

1. Does your agency provide sewer service? (If YES, answer questions 2 - 7 below, else continue to section D.)

yes

**2. Single Family Residential**

- |  |                          |
|--|--------------------------|
| a. Sewer Rate Structure                                    | Non-volumetric Flat Rate |
| b. Total Annual Revenue                                    | \$ 2,551,173             |
| c. Total Revenue from Commodity Charges (Volumetric Rates) | \$ 0                     |

**3. Multi-Family Residential**

- |                         |                      |
|-------------------------|----------------------|
| a. Sewer Rate Structure | Service Not Provided |
|-------------------------|----------------------|

b. Total Annual Revenue \$ 0

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**4. Commercial**

a. Sewer Rate Structure Non-volumetric Flat Rate

b. Total Annual Revenue \$ 401,808

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**5. Industrial**

a. Sewer Rate Structure Non-volumetric Flat Rate

b. Total Annual Revenue \$ 211,200

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**6. Institutional / Government**

a. Sewer Rate Structure Non-volumetric Flat Rate

b. Total Annual Revenue \$ 134,376

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**7. Recycled-reclaimed water**

a. Sewer Rate Structure Service Not Provided

b. Total Annual Revenue \$ 0

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**D. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**

Reported as of 12/24/08

**BMP 12: Conservation Coordinator**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2007****A. Implementation**

1. Does your Agency have a conservation coordinator? yes
2. Is a coordinator position supplied by another agency with which you cooperate in a regional conservation program ? no
  - a. Partner agency's name: Calleguas Municipal Water District and Metropolitan Water District
3. If your agency supplies the conservation coordinator:
  - a. What percent is this conservation coordinator's position? 75%
  - b. Coordinator's Name Karen Goodman
  - c. Coordinator's Title Conservation Coordinator
  - d. Coordinator's Experience in Number of Years Conservation Coordinator for District 2 years Experience 5
  - e. Date Coordinator's position was created (mm/dd/yyyy) 01/01/1994
4. Number of conservation staff (FTEs), including Conservation Coordinator. 2

**B. Conservation Staff Program Expenditures**

1. Staffing Expenditures (In-house Only) 34027
2. BMP Program Implementation Expenditures 67516.8

**C. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? no
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 12/24/08

**BMP 13: Water Waste Prohibition**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2007****Dist. #1****A. Requirements for Documenting BMP Implementation**

1. Is a water waste prohibition ordinance in effect in your service area? yes

a. If YES, describe the ordinance:

The ordinance states "Water Waste Prohibited: No person shall use or permit the use of District water for watering of turf, etc. in such a manner which allows water to run to waste; leaks or breaks in the distribution are ignored; operating ornamental fountains that do not recycle the water; washing of sidewalks, walkways, or driveways except as necessary for public safety; serve water in restaurants without being requested by the customer; watering or operating outdoor irrigation system between 9:00am-4:00pm, except as necessary to test the system; running of water or spraying of water onto other properties.

2. Is a copy of the most current ordinance(s) on file with CUWCC? yes

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Moorpark

None this period

**B. Implementation**

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

a. Gutter flooding	yes
b. Single-pass cooling systems for new connections	no
c. Non-recirculating systems in all new conveyor or car wash systems	yes
d. Non-recirculating systems in all new commercial laundry systems	no
e. Non-recirculating systems in all new decorative fountains	yes
f. Other, please name See A.1.a	yes

2. Describe measures that prohibit water uses listed above:

Ventura County Waterworks District #1 Rules and Regulations as approved by the County of Ventura Board of Supervisors.

**Water Softeners:**

3. Indicate which of the following measures your agency has supported in developing state law:

a. Allow the sale of more efficient, demand-initiated regenerating DIR models.	yes
b. Develop minimum appliance efficiency standards that:	
i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used.	yes
ii.) Implement an identified maximum number of	

gallons discharged per gallon of soft water produced. yes

c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply. yes

4. Does your agency include water softener checks in home water audit programs? yes

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? no

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 12/24/08

**BMP 14: Residential ULFT Replacement Programs**

Reporting Unit:

**Ventura County Waterworks Dist. #1**

BMP Form Status:

**100% Complete**

Year:

**2007****A. Implementation****Number of Non-Efficient Toilets Replaced With 1.6 gpf Toilets During Report Year**

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
2. Rebate	20	0
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
<b>Total</b>	<b>20</b>	<b>0</b>

**Number of Non-Efficient Toilets Replaced With 1.28 gpf High-Efficiency Toilets (HETs) During Report Year**

	Single-Family Accounts	Multi-Family Units
6. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	no	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
7. Rebate		
8. Direct Install		
9. CBO Distribution		
10. Other		
<b>Total</b>		

**Number of Non-Efficient Toilets Replaced With 1.2 gpf HETs (Dual-Flush) During Report Year**

	Single-Family Accounts	Multi-Family Units
11. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	no	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
12. Rebate		
13. Direct Install		
14. CBO Distribution		
15. Other		
<b>Total</b>		

16. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for single-family residences.

We offer a \$60 rebate for each new ULFT installed, up to a maximum of two toilets per household. Rebate is given as a credit to the customer's account after the customer provides proof that the ULFT is installed and the old toilet has been disposed of properly

17. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for multi-family residences.

18. Is a toilet retrofit on resale ordinance in effect for your service area? no

19. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

Waterworks District #1

No Citations

### **B. Residential ULFT Program Expenditures**

1. Estimated cost per replacement: \$ 60

### **C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### **D. Comments**





Reported as of 12/22/08

**Water Supply & Reuse**

Reporting Unit:

**Ventura County Waterworks Dist. #1**

Year:

**2008****Water Supply Source Information**

Supply Source Name	Quantity (AF) Supplied	Supply Type
Calleguas Municipal Water	11914.1	Imported
Groundwater	1493	Groundwater

**Total AF: 13407.1**

Reported as of 12/22/08

**Accounts & Water Use**

Reporting Unit Name:  
**Ventura County Waterworks**  
 Dist. #1

Form Status:  
**100% Complete**

Year:  
**2008**

**A. Service Area Population Information:**

1. Total service area population 36814

**B. Number of Accounts and Water Deliveries (AF)**

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	9563	7781.8	0	0
2. Multi-Family	0	0	0	0
3. Commercial	211	718.7	0	0
4. Industrial —	71	242.5	0	0
5. Institutional —	144	850.4	0	0
6. Dedicated Irrigation	173	2868.5	0	0
7. Recycled Water	1	469.3	0	0
8. Other	256	52.9	0	0
9. Unaccounted	NA	0	NA	0
<b>Total</b>	10419	12984.1	0	0

**Metered****Unmetered**

## BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:

Ventura County Waterworks Dist.  
#1BMP Form Status:  
100% CompleteYear:  
2008

### A. Implementation

- |  |            |
|--|------------|
| 1. Based on your signed MOU date, 08/27/1991, your Agency STRATEGY DUE DATE is:  | 08/26/1993 |
| 2. Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys? | yes        |
| a. If YES, when was it implemented?  | 01/01/1993 |
| 3. Has your agency developed and implemented a targeting/marketing strategy for MULTI-FAMILY residential water use surveys?  | yes        |
| a. If YES, when was it implemented?  | 01/01/1993 |

### B. Water Survey Data

#### Survey Counts:

	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	4	0
2. Number of surveys completed:	4	0

#### Indoor Survey:

3. Check for leaks, including toilets, faucets and meter checks	yes	yes
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	yes	yes
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary	yes	yes

#### Outdoor Survey:

6. Check irrigation system and timers	yes	yes
7. Review or develop customer irrigation schedule	yes	yes
8. Measure landscaped area (Recommended but not required for surveys)	yes	yes
9. Measure total irrigable area (Recommended but not required for surveys)	yes	yes
10. Which measurement method is typically used (Recommended but not required for surveys)		Other
11. Were customers provided with information packets that included evaluation results and water savings recommendations?	yes	yes
12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?	yes	yes
a. If yes, in what form are surveys tracked?		spreadsheet
b. Describe how your agency tracks this information.		

We keep records of each survey offered, status of each survey, resultant allocation adjustments.

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### **D. Comments**

**BMP 02: Residential Plumbing Retrofit**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2008****Dist. #1****A. Implementation**

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no

a. If YES, list local jurisdictions in your service area and code or ordinance in each:

2. Has your agency satisfied the 75% saturation requirement for single-family housing units? yes

3. Estimated percent of single-family households with low-flow showerheads: 85%

4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no

5. Estimated percent of multi-family households with low-flow showerheads: 60%

6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

We keep records of each survey offered, status of each survey, resultant allocation adjustments.

**B. Low-Flow Device Distribution Information**

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes

a. If YES, when did your agency begin implementing this strategy? 01/01/1994

b. Describe your targeting/ marketing strategy.

We put a comment on our bills to advertise out "ULFT Toilet Rebate" Program. There is also information regarding available rebates on our website. Distributed low-flow showerheads at our local Country Days event.

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	100	0
3. Number of toilet-displacement devices distributed:	0	0
4. Number of toilet flappers distributed:	2	0
5. Number of faucet aerators distributed:	0	0
6. Does your agency track the distribution and cost of low-flow devices? <span style="float: right;">yes</span>		
a. If YES, in what format are low-flow devices tracked? <span style="float: right;">Spreadsheet</span>		
b. If yes, describe your tracking and distribution system :		

We keep a database to identify all customers who receive rebates, and the number of rebates(maximum 2) for each customer. This allows us to determine the number and amount of rebates during any one year. We do not track cost of ULFTs because they are provided through CMWD. After July 2008 all information regarding rebates will be done through the Regional Rebate Program offered through MWD and CMWD.

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 03: System Water Audits, Leak Detection and Repair**

Reporting Unit:

**Ventura County Waterworks Dist.  
#1**

BMP Form Status:

**100% Complete**

Year:

**2008****A. Implementation**

1. Does your agency own or operate a water distribution system? yes
2. Has your agency completed a pre-screening system audit for this reporting year? yes
3. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF) 12514.9
  - b. Determine other system verifiable uses (AF) 0
  - c. Determine total supply into the system (AF) 13406.8
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.93
4. Does your agency keep necessary data on file to verify the values entered in question 3? yes
5. Did your agency complete a full-scale audit during this report year? yes
6. Does your agency maintain in-house records of audit results or completed AWWA M36 audit worksheets for the completed audit which could be forwarded to CUWCC? yes
7. Does your agency operate a system leak detection program? yes
  - a. If yes, describe the leak detection program:

Purchases and sales are tracked on a monthly basis. We perform system leak detection when our unaccounted water loss >6%, and we repair all leaks when found. O&M staff has regularly scheduled system check. We also monitor unmetered water use, such as water used in flushing and other system maintenance.

**B. Survey Data**

1. Total number of miles of distribution system line. 138
2. Number of miles of distribution system line surveyed. 138

**C. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? yes
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

differs from Exhibit 1 and why you consider it to be "at least as effective as." We compare production vs. consumption to be sure percentage of loss is less than 6%

**D. Comments****Voluntary Questions (Not used to calculate compliance)****E. Volumes**

	Estimated	Verified
--	-----------	----------

1. Volume of raw water supplied to the system:

2. Volume treated water supplied into the system:
3. Volume of water exported from the system:
4. Volume of billed authorized metered consumption:
5. Volume of billed authorized unmetered consumption:
6. Volume of unbilled authorized metered consumption:
7. Volume of unbilled authorized unmetered consumption:

## **F. Infrastructure and Hydraulics**

1. System input (source or master meter) volumes metered at the entry to the:
2. How frequently are they tested and calibrated?
3. Length of mains:
4. What % of distribution mains are rigid pipes (metal, ac, concrete)?
5. Number of service connections:
6. What % of service connections are rigid pipes (metal)?
7. Are residential properties fully metered?
8. Are non-residential properties fully metered?
9. Provide an estimate of customer meter under-registration:
10. Average length of customer service line from the main to the point of the meter:
11. Average system pressure:
12. Range of system pressures:

From to

13. What percentage of the system is fed from gravity feed?
14. What percentage of the system is fed by pumping and re-pumping?

## **G. Maintenance Questions**

1. Who is responsible for providing, testing, repairing and replacing customer meters?
2. Does your agency test, repair and replace your meters on a regular timed schedule?
  - a. If yes, does your agency test by meter size or customer category?:
    - Less than or equal to 1"
    - 1.5" to 2"
    - 3" and Larger
  - b. If yes to meter size, please provide the frequency of testing by meter size:
  - c. If yes to customer category, provide the frequency of testing by customer category:
    - SF residential
    - MF residential
    - Commercial
    - Industrial & Institutional
3. Who is responsible for repairs to the customer lateral or customer service line?



4. Who is responsible for service line repairs downstream of the customer meter?

5. Does your agency proactively search for leaks using leak survey techniques or does your utility reactively repair leaks which are called in, or both?

6. What is the utility budget breakdown for:

Leak Detection	\$
Leak Repair	\$
Auditing and Water Loss Evaluation	\$
Meter Testing	\$

#### H. Comments

## BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit:

Ventura County Waterworks Dist.

BMP Form Status:

100% Complete

Year:

2008

#1

### A. Implementation

1. Does your agency have any unmetered service connections? No
  - a. If YES, has your agency completed a meter retrofit plan?
  - b. If YES, number of previously unmetered accounts fitted with meters during report year:
2. Are all new service connections being metered and billed by volume of use? Yes
3. Are all new service connections being billed volumetrically with meters? Yes
4. Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? No
5. Please fill out the following matrix:

Account Type	Number of Metered Accounts	Number of Metered Accounts Read	Number of Metered Accounts Billed by Volume	Billing Frequency Per Year	Number of Volume Estimates
a. Single Family	9563	9563	9563	6	0
b. Multi-Family	0	0	0	6	0
c. Commercial	211	211	211	6	0
d. Industrial	71	71	71	6	0
e. Institutional	144	144	144	6	0
f. Landscape Irrigation	173	173	173	12	0

### B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? no
  - a. If YES, when was the feasibility study conducted? (mm/dd/yy)
  - b. Describe the feasibility study:
2. Number of CII accounts with mixed-use meters: 304
3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. 0

### C. "At Least As Effective As"

1. Is your agency implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

## BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:

Ventura County

BMP Form Status:

100% Complete

Year:

2008

Waterworks Dist. #1

### A. Water Use Budgets

- |  |     |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts:  | 719 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:                         | 719 |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting year: | 719 |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF) during reporting year:   | 719 |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle?   | yes |

### B. Landscape Surveys

- |  |            |
|--|------------|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | yes        |
| a. If YES, when did your agency begin implementing this strategy?                    | 01/01/1994 |
| b. Description of marketing / targeting strategy:                                    |            |

District has contracted with a consultant to perform large landscape water audits for high use customers who exceed their allocations. At the time of billing, top water users are identified. Upon review of their accounts, if warranted, these customers are sent applications to request a review of their allocations. If a review of the account history and the information provided in the application suggests above normal water consumption, the customer will be offered a water audit. The audit will help determine the appropriateness of the allocation, and also used to determine methods of water conservation. We also offered a California Friendly Landscape training class to our customers.

- |   |     |
|---|-----|
| 2. Number of Surveys Offered during reporting year.                             | 30  |
| 3. Number of Surveys Completed during reporting year.                           | 6   |
| 4. Indicate which of the following Landscape Elements are part of your survey:  |     |
| a. Irrigation System Check  | yes |
| b. Distribution Uniformity Analysis   | yes |
| c. Review / Develop Irrigation Schedules  | yes |
| d. Measure Landscape Area   | yes |
| e. Measure Total Irrigable Area   | yes |
| f. Provide Customer Report / Information  | yes |
| 5. Do you track survey offers and results?                                      | yes |
| 6. Does your agency provide follow-up surveys for previously completed surveys? | yes |
| a. If YES, describe below:  |     |

We review the water use to confirm efficient water use. If customer continues having a problem being efficient, we offer a follow up audit to determine whether the conservation recommendations have been implemented and to review irrigation schedules.

### C. Other BMP 5 Actions

- |  |     |
|--|-----|
| 1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey | yes |
|--|-----|

program.

Does your agency provide mixed-use accounts with landscape budgets?

2. Number of CII mixed-use accounts with landscape budgets. 23

Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. (From BMP 4 report) 0

Total number of change-outs from mixed-use to dedicated irrigation meters since Base Year.

3. Do you offer landscape irrigation training? yes

4. Does your agency offer financial incentives to improve landscape water use efficiency? no

Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? yes

a. If YES, describe below:

The Ventura County Water Conservation Program coordinated efforts of numerous individuals and agencies on the Water Conservation Landscape Task Force to prepare the Landscape Design Criteria to comply with AB 325, Water Conservation in Landscaping Act. The Ventura County Board of Supervisors and the Board of Directors for the Ventura County Waterworks District No. 1 adopted the criteria in October 1992. The criteria use the water budget approach. We also have a variety of brochures available that detail plant water requirements and preferred irrigation practices, including "Sustainable Landscaping: Resource Efficient Landscape for the Central Coast," "Top Ten Ways to Conserve Water," and the County's "Landscape Design Criteria."

6. Do you have irrigated landscaping at your facilities? yes

a. If yes, is it water-efficient? yes

b. If yes, does it have dedicated irrigation metering? yes

7. Do you provide customer notices at the start of the irrigation season? yes

8. Do you provide customer notices at the end of the irrigation season? yes

#### D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### E. Comments

## BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
Ventura County Waterworks  
Dist. #1

BMP Form Status:  
100% Complete

Year:  
2008

### A. Coverage Goal

	Single Family	Multi- Family
1. Number of <b>residential</b> dwelling units in the agency service area.	9,106	0
2. Coverage Goal =	<b>= 699 Points</b>	

### B. Implementation

1. Does your agency offer rebates for **residential** high-efficiency washers? yes

HEW Water Factor	Total Value of Financial Incentives				TOTAL	POINTS AWARDED
	Number of Financial Incentives Issued	Retail Water Agency	Wholesaler/ Grants (if applicable)	Energy Utility (if applicable)		
2. Greater than 8.5 but not exceeding 9.5 (1 point)	0	\$ 0	\$ 0	\$ 0	\$ 0	0
3. Greater than 6.0 but not exceeding 8.5 (2 points)	0	\$ 0	\$ 0	\$ 0	\$ 0	0
4. Less than or equal to 6.0 (3 points)	24	\$ 440	\$ 3,165	\$ 0	\$ 3,605	72
<b>TOTALS:</b>	<b>24</b>	<b>\$ 440</b>	<b>\$ 3,165</b>	<b>\$ 0</b>	<b>\$ 3,605</b>	<b>72</b>

### C. Past Credit Points

For HEW incentives issued before July 1, 2004, select ONE of the following TWO options:

- Method One: Points based on HEW Water Factor
- Method Two: Agency earns 1 point for each HEW.

PAST CREDIT TOTALS:	0	\$ 0	0
---------------------	---	------	---

### D. Rebate Program Expenditures

1. Average or Estimated Administration and Overhead	\$ 0
2. Is the financial incentive offered per HEW at least equal to the marginal benefits of the water savings per HEW?	yes

### E. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**F. Comments**

Participating in the MWD Regional Rebate Program which started July 2008

**BMP 07: Public Information Programs**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2008**

Dist. #1

**A. Implementation**

1. How is your public information program implemented?

Wholesaler and retailer both materially participate in program

Which wholesaler(s)?

Wholesaler and retailer both participate in program

2. Describe the program and how it's organized:

Public Information Messages on bills regarding Ultra Low Flush Toilet (ULFT) rebate program (finished in 7/2008) seasonal tiers, conservation tips indoors and outdoors. 2. Brochures regarding water saving tips, waterwise gardening, High Efficiency Toilets and Washers and seed give aways etc. at customer service desk. 3. Gardens at the main entry to our customer service office and in the courtyard were planted with drought-resistant plants and designed to demonstrate the beauty of such plants. 4. "Water Awareness Month" activities including an annual "Water Awareness" poster contest. 5. Bill compares current usage to use during the same time period in the previous year. 6. Annual Water Quality Report 7. Participation in Local Country Days Event, giveaway conservation, educational items, low flow shower heads. 8. Bill inserts on Landscape training classes and conservation.

3. Indicate which and how many of the following activities are included in your public information program:

Public Information Program Activity in Retail Service Area	Yes/No	Number of Events
a. Paid Advertising	no	
b. Public Service Announcement	no	
c. Bill Inserts / Newsletters / Brochures	yes	6
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	0
f. Special Events, Media Events	yes	4
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

**B. Conservation Information Program Expenditures**

1. Annual Expenditures (Excluding Staffing) 4250

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 08: School Education Programs**

Reporting Unit:

**Ventura County**

BMP Form Status:

**100% Complete**

Year:

**2008****Waterworks Dist. #1****A. Implementation**

1. How is your public information program implemented?

Wholesaler implements program (none or minimal retailer participation)

Which wholesaler(s)?

Wholesaler and retailer both participate in program MWD, CMWD

**Public Information Program Activity Reported By Wholesaler**



**BMP 09: Conservation Programs for CII Accounts**

Reporting Unit:

**Ventura County**

BMP Form Status:

**100% Complete**

Year:

**2008****A. Implementation**

- |  |     |
|--|-----|
| 1. Has your agency identified and ranked COMMERCIAL customers according to use?    | yes |
| 2. Has your agency identified and ranked INDUSTRIAL customers according to use?    | yes |
| 3. Has your agency identified and ranked INSTITUTIONAL customers according to use? | yes |

**Option A: CII Water Use Survey and Customer Incentives Program**

- |  |    |
|--|----|
| 4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? If so, please describe activity during reporting period: | no |
|--|----|

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	1	0	6
b. Number of New Surveys Completed	0	0	3
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0

CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit			yes
f. Evaluation of all water-using apparatus and processes			yes
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives			yes

Agency CII Customer Incentives	Budget (\$/Year)	# Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

**Option B: CII Conservation Program Targets**

- |  |    |
|--|----|
| 5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this | no |
|--|----|

option?

6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?

no

7. System Calculated annual savings (AF/yr):

CII Programs	# Device Installations
a. Ultra Low Flush Toilets	0
b. Dual Flush Toilets	0
c. High Efficiency Toilets	0
d. High Efficiency Urinals	0
e. Non-Water Urinals	0
f. Commercial Clothes Washers (coin-op only; not industrial)	0
g. Cooling Tower Controllers	0
h. Food Steamers	0
i. Ice Machines	0
j. Pre-Rinse Spray Valves	0
k. Steam Sterilizer Retrofits	0
l. X-ray Film Processors	0

8. Estimated annual savings (AF/yr) from agency programs not including the devices listed in Option B. 7., above:

CII Programs	Annual Savings (AF/yr)
a. Site-verified actions taken by agency:	0
b. Non-site-verified actions taken by agency:	0

### B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your agency implementing an "at least as effective as" variant of this BMP? yes

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

The District has participated in a Commercial, Industrial, and Institutional (CII) Water Audit Program with Metropolitan Water District and Calleguas Municipal Water District. At that time, the consultants doing the the surveys reviewed our database and determined which customers would benefit from the audits and which audits would most likely be cost effective and result in recommendations to facilitate substantial water savings. Audits were performed for those customers agreeing to participate in the program. Most of these customers have implemented the recommendations made by the consultants. Currently the District offers requests for review of water allocations, which are used to survey the water use and Best Management Practices for the customer. Water audits are also offered to our customers who exceed their allocations or request an audit to help determine more efficient water use and suggest methods of water conservation.

### D. Comments

**BMP 11: Conservation Pricing**

Reporting Unit:

BMP Form

Year:

Ventura County Waterworks

Status:

2008

Dist. #1

100% Complete

**A. Implementation****Water Service Rate Structure Data by Customer Class****1. Single Family Residential**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 6,959,738
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 1,082,515

**2. Multi-Family Residential**

a. Rate Structure	Service Not Provided
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 0
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 0

**3. Commercial**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 666,225
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 94,132

**4. Industrial**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 230,713
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 31,337

**5. Institutional / Government**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 620,327
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 94,132

**6. Dedicated Irrigation (potable)**

a. Rate Structure	Allocation-Based
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 1,605,417
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 235,329

**7. Recycled-Reclaimed**

a. Rate Structure	Increasing Block Seasonal
b. Total Revenue from Commodity Charges (Volumetric Rates)	\$ 298,989
c. Total Revenue from Customer Meter/Service (Fixed) Charges	\$ 4,698

**8. Raw**

a. Rate Structure	Service Not Provided
-------------------	----------------------

b. Total Revenue from Commodity Charges (Volumetric Rates) \$ 0

c. Total Revenue from Customer Meter/Service (Fixed) Charges \$ 0

**9. Other**

a. Rate Structure Service Not Provided

b. Total Revenue from Commodity Charges (Volumetric Rates) \$ 0

c. Total Revenue from Customer Meter/Service (Fixed) Charges \$ 0

**B. Implementation Options**

**Select Either Option 1 or Option 2:**

**1. Option 1: Use Annual Revenue As Reported**

$$V/(V+M) \geq 70\%$$

V = Total annual revenue from volumetric rates

M = Total annual revenue from customer meter/service (fixed) charges

Selected

**2. Option 2: Use Canadian Water & Wastewater Association Rate Design Model**

$$V/(V+M) \geq V'/(V'+M')$$

V = Total annual revenue from volumetric rates

M = Total annual revenue from customer meter/service (fixed) charges

V' = The uniform volume rate based on the signatory's long-run incremental cost of service

M' = The associated meter charge

a. If you selected Option 2, has your agency submitted to the Council a completed Canadian Water & Wastewater Association rate design model?

b. Value for V' (uniform volume rate based on agency's long-run incremental cost of service) as determined by the Canadian Water & Wastewater Association rate design model:

c. Value for M' (meter charge associated with V' uniform volume rate) as determined by the Canadian Water & Wastewater Association rate design model:

**C. Retail Wastewater (Sewer) Rate Structure Data by Customer Class**

1. Does your agency provide sewer service? (If YES, answer questions 2 - 7 below, else continue to section D.)

yes

**2. Single Family Residential**

a. Sewer Rate Structure Non-volumetric Flat Rate

b. Total Annual Revenue \$ 2,702,902

c. Total Revenue from Commodity Charges (Volumetric Rates) \$ 0

**3. Multi-Family Residential**

a. Sewer Rate Structure Service Not Provided

b. Total Annual Revenue \$ 0

c. Total Revenue from Commodity Charges (Volumetric Rates) \$ 0

**4. Commercial**

a. Sewer Rate Structure Non-volumetric Flat Rate

b. Total Annual Revenue \$ 464,232

c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**5. Industrial**

a. Sewer Rate Structure Non-volumetric Flat Rate  
b. Total Annual Revenue \$ 226,872  
c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**6. Institutional / Government**

a. Sewer Rate Structure Non-volumetric Flat Rate  
b. Total Annual Revenue \$ 109,848  
c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**7. Recycled-reclaimed water**

a. Sewer Rate Structure Service Not Provided  
b. Total Annual Revenue \$ 0  
c. Total Revenue from  
Commodity Charges  
(Volumetric Rates) \$ 0

**D. "At Least As Effective As"**

1. Is your agency implementing an "at least as  
effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this  
BMP differs from Exhibit 1 and why you consider it to be "at least as  
effective as."

**E. Comments**

**BMP 12: Conservation Coordinator**

Reporting Unit:

Ventura County Waterworks

Dist. #1

BMP Form Status:

100% Complete

Year:

2008

**A. Implementation**

1. Does your Agency have a conservation coordinator? yes
2. Is a coordinator position supplied by another agency with which you cooperate in a regional conservation program ? no
  - a. Partner agency's name: Calleguas Municipal Water District and Metropolitan Water District
3. If your agency supplies the conservation coordinator:
  - a. What percent is this conservation coordinator's position? 75%
  - b. Coordinator's Name Karen Goodman
  - c. Coordinator's Title Conservation Coordinator
  - d. Coordinator's Experience in Number of Years Conservation Coordinator for District years Experience 6
  - e. Date Coordinator's position was created (mm/dd/yyyy) 01/01/1994
4. Number of conservation staff (FTEs), including Conservation Coordinator. 2

**B. Conservation Staff Program Expenditures**

1. Staffing Expenditures (In-house Only) 37927.5
2. BMP Program Implementation Expenditures 67516.8

**C. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? no
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 13: Water Waste Prohibition**

Reporting Unit:

**Ventura County Waterworks**

BMP Form Status:

**100% Complete**

Year:

**2008**

Dist. #1

**A. Requirements for Documenting BMP Implementation**

1. Is a water waste prohibition ordinance in effect in your service area? yes

a. If YES, describe the ordinance:

The ordinance states "Water Waste Prohibited: No person shall use or permit the use of District water for watering of turf, etc. in such a manner which allows water to run to waste; leaks or breaks in the distribution are ignored; operating ornamental fountains that do not recycle the water; washing of sidewalks, walkways, or driveways except as necessary for public safety; serve water in restaurants without being requested by the customer; watering or operating outdoor irrigation system between 9:00am-4:00pm, except as necessary to test the system; running of water or spraying of water onto other properties.

2. Is a copy of the most current ordinance(s) on file with CUWCC? yes

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Moorpark

None this period

**B. Implementation**

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

- |  |     |
|--|-----|
| a. Gutter flooding   | yes |
| b. Single-pass cooling systems for new connections                   | no  |
| c. Non-recirculating systems in all new conveyor or car wash systems | yes |
| d. Non-recirculating systems in all new commercial laundry systems   | no  |
| e. Non-recirculating systems in all new decorative fountains         | yes |
| f. Other, please name<br>See A.1.a                                   | yes |

2. Describe measures that prohibit water uses listed above:

Ventura County Waterworks District #1 Rules and Regulations as approved by the County of Ventura Board of Supervisors.

**Water Softeners:**

3. Indicate which of the following measures your agency has supported in developing state law:

- |   |     |
|---|-----|
| a. Allow the sale of more efficient, demand-initiated regenerating DIR models.  | yes |
| b. Develop minimum appliance efficiency standards that:   |     |
| i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used. | yes |
| ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.                          | yes |
| c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to            |     |

ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.

yes

4. Does your agency include water softener checks in home water audit programs?

yes

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?

no

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**



**BMP 14: Residential ULFT Replacement Programs**

Reporting Unit:

Ventura County Waterworks Dist. #1

BMP Form Status:

100% Complete

Year:

2008

**A. Implementation**

**Number of Non-Efficient Toilets Replaced With 1.6 gpf Toilets During Report Year**

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
2. Rebate	13	0
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
<b>Total</b>	<b>13</b>	<b>0</b>

**Number of Non-Efficient Toilets Replaced With 1.28 gpf High-Efficiency Toilets (HETs) During Report Year**

	Single-Family Accounts	Multi-Family Units
6. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
7. Rebate	24	0
8. Direct Install	0	0
9. CBO Distribution	0	0
10. Other	0	0
<b>Total</b>	<b>24</b>	<b>0</b>

**Number of Non-Efficient Toilets Replaced With 1.2 gpf HETs (Dual-Flush) During Report Year**

	Single-Family Accounts	Multi-Family Units
11. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	no
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
12. Rebate	0	0
13. Direct Install	0	0
14. CBO Distribution	0	0
15. Other	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

16. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for single-family residences.

We offered a \$60 rebate for each new ULFT installed, up to a maximum of two toilets per household. Rebate is given as a credit to the customer's account after the customer provides proof that the ULFT is installed and the old toilet has been disposed of properly. New Regional Rebate Program started in July 2008 rebates for UFLT no longer available. Rebates on HET 1.28 gpf are \$185.00 available if replacing non-efficient toilets, with an new HET. A rebate of \$50.00 available if replacing ULFT with HET.

17. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for multi-family residences.

18. Is a toilet retrofit on resale ordinance in effect for your service area? no

19. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

Waterworks District #1

No Citations

#### **B. Residential ULFT Program Expenditures**

1. Estimated cost per replacement: \$ 60

#### **C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### **D. Comments**

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

# Base Year Data

[Link to FAQs](#)

**Reporting Unit** **Base Year**

What is your reporting period?

Base Year

**BMP 1.3** **Metering**

Number of unmetered accounts in Base Year

**BMP 3.1 & BMP 3.2 & BMP 3.3** **Residential Programs**

Number of Single Family Customers in Base Year

Number of Multi Family Units in Base Year

**BMP 3.4** **WaterSense Specification (WSS) Toilets**

Number of Single Family Housing Units constructed prior to 1992

Number of Multi Family Units prior to 1992

Average number of toilets per single family household

Average number of toilets per multi family household

Five year average resale rate of single family households

Five-year average resale rate of multi family households

Average number of persons per single family household

Average number of persons per multi family household

**BMP 4.0 & BMP 5.0** **CII & Landscape**

Total water use (in Acre Feet) by CII accounts

Number of accounts with dedicated irrigation meters

Number of CII accounts without meters or with Mixed Use Meters

Number of CII accounts

Comments:

The fields in red are required.

Agency name:

Division name  
(Reporting unit)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:



2009

Service Area Population:

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail, etc.
---------------------	---------	--

Email:



# Water Uses 2009

## Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	----------------	-------------------------	---------------------	----------------------------	-------------

## Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	----------------	-------------------------	---------------------	----------------------------	-------------

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name  
(Reporting unit)

Last name:

Reporting unit number:

Email:



WATER SOURCES

2009

Service Area Population:

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported?
---------------------	---------	-----------------

The fields in red are required.



Agency name:

Division name  
(Reporting unit)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

# Water Uses

# 2009

## Potable Water Billed

Make sure to enter numbers in AF/Year.



Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	-------------------	-------------------------------	------------------------	-------------------------------	-------------

## Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	-------------------	-------------------------------	------------------------	-------------------------------	-------------

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

# 2009

## BMP 1.1 Operations Practices

Comments:

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

### Conservation Coordinator

Conservation Coordinator      Yes      No

### Contact Information

First Name

Last Name

Title

Phone

Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

### Water Waste Prevention

Water Agency shall do one or more of the following:

- Enact and enforce an ordinance or establish terms of service that prohibit water waste
- Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- Support legislation or regulations that prohibit water waste
- Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- Support local ordinances that prohibit water waste
- Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- A description of, or electronic link to, any ordinances or terms of service
- A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- description of agency support positions with respect to adoption of legislation or regulations

**You can show your documentation by providing files, links (web addresses), and/or entering a description.**



**File name(s):** Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

**Web address(s) URL:** comma-separated list

**Enter a description:**



The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)



# 2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009?

Yes

No

If yes, answer the following:

Determine metered sales in AF:

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.



Determine system verifiable uses AF:

Determine total supply into the system in AF:

Does your agency keep necessary data on file to verify the answers above?

Yes

No

Did your agency complete a full-scale system water audit during 2009?

Yes

No

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC?

Yes

No

Did your agency operate a system leak detection program?

Yes

No

Comments:

The fields in red are required.

Agency name:  
Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



# BMP 1.3 Metering with Commodity

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

## Implementation

Does your agency have any unmetered service connections? Yes No

If YES, has your agency completed a meter retrofit plan? Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? Yes No

Are all new service connections being billed volumetrically? Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

### Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
--------------	--------------------	-------------------------	-------------------------------------	----------------------------	-------------------------

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

## Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes No

If YES, please fill in the following information:

- A. When was the Feasiblity Study conducted
- B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

## General Comments about BMP 1.3:

The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



2009

[Link to FAQs](#)

[View MOU](#)

## BMP 1.4 Retail Conservation Pricing

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to [natalie@cuwcc.org](mailto:natalie@cuwcc.org).

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

### Implementation Option (Conservation Pricing Option)

Use Annual Revenue As Reported  
Use Canadian Water & Wastewater Association Rate  
Design Model

If CWWA is select, enter the file name and email the spreadsheet to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service

Yes No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Comments:

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

2009

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

Number of Public Contacts		Public Information Programs	

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

#### Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types	

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? Yes No

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Did at least one Website Update take place during each quarter of the reporting year? Yes No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	

Comments:

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

2009

BMP 2.1 Public Outreach Cont'd

[View MOU](#)

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
If yes, check the check box.			

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? Yes No

Public Outreach Additional Information

Public Information Programs	Importance	

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? Yes No

Describe the brand, theme or mascot.

Market Research

Have you sponsored or participated in market research to refine your message? Yes No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? Yes No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description	

Partnering Programs - Partners

- NameType of Program
- CLCA?
- Green Building Programs?
- Master Gardeners?
- Cooperative Extension?
- Local Colleges?
- Other

Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

### **Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

### **Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

### **Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Comments:



The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

2009

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JJYk`ACI

School Programs

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8YgW]dhcb`cZ`U`chYf`k UHYf`g`dd`]Yf`YXi W hcb`dfc[ fUa g

School Program Activities

Classroom presentations:

Bi a VYf`cZ`dfYgYbU]cbg

Bi a VYf`cZ`UHYbXYYg`

Large group assemblies:

Bi a VYf`cZ`dfYgYbU]cbg

Bi a VYf`cZ`UHYbXYYg`

Children’s water festivals or other events:

Bi a VYf`cZ`dfYgYbU]cbg

Bi a VYf`cZ`UHYbXYYg`

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Bi a VYf`cZ`dfYgYbU]cbg

Bi a VYf`cZ`UHYbXYYg`

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

8YgWdhcb

Bi a VYf`X]gr]Vi hXX

**Staffing children's booths at events & festivals:**

Bi a VYf`cZVcch\g

Bi a VYf`cZUhhYbXYYg`

**Water conservation contests such as poster and photo:**

8YgWdhcb

Bi a VYf`X]gr]Vi hXX

**Offer monetary awards/funding or scholarships to students:**

Bi a VYf`CZ/fYX

HchU` : i bX]b[ `

**Teacher training workshops:**

Bi a VYf`cZdfYgYbhU]cbg

Bi a VYf`cZUhhYbXYYg`

**Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:**

Bi a VYf`cZhci fg`cf`Z`Y`X  
hf]dg

Bi a VYf`cZdUhhYbXYYg`

**College internships in water conservation offered:**

Bi a VYf`cZ]bhYfbg\]dg

HchU`Z bX]b[ `

**Career fairs/workshops:**

Bi a VYf`cZdfYgYbhU]cbg

Bi a VYf`cZUhhYbXYYg`

**Additional program(s) supported by agency but not mentioned above:**

8YgWdhcb

Bi a VYf`cZYj Ybhg`f]Z  
Udd`]WV`Yk

Bi a VYf`cZdUhhYbXYYg`

**Total reporting period budget expenditures for school education programs  
(include all agency costs):**

Comments

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2009

## BMP 3 Residential

### Traditional (Sections A - D)

### Flex Track (All Sections)

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings were measured and that the measure was adequately tracked ( i.e., all relevant data was collected ) - in some cases there are specific data points also requested in form which are necessary to show that the measure was implemented as described.

### A) Residential Assistance / Leak Detection

	Single Family	Multi Family	Total Water Savings AF/YR	Measured Water Savings AF/YR
Flex Track	Traditional		Total Number of Accounts	
			Total Number of Participants Overall	
			Total Number of Leak Det Surveys	
			Total Number of Showerheads	
			Total Number of Faucet Aerators	
			Total Number of Landscape Water Survey	
			Number of Other Components	
			Description of Other Components Distributed	
			If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)	

### B) High Efficiency Clothes Washers (HECWs)

Flex Track	Traditional	Number of incentives for HECWs with an AVERAGE Water Factor of 5.0		Measured water savings (AF/Year)
		Are Financial incentives provided for HECWs ?		
		Yes	No	
		Has your Agency completed a HECW Market Penetration Study (this question does not impact your coverage report, purely informational)		
		Yes	No	
HECW Market Penetration Study Documents (Enter the file name and Email file to Natalie@cuwcc.org)				

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

C) WaterSense Specification (WSS) Toilets

(Agency must complete information for at least one coverage option (For Traditional 1, 2, or 3; For Flex Tarck 1, 2, 3, or 4).  
You are encouraged to include information on other coverage options, as available.  
If seeking credit for additional water savings, you must select Flex Track option)

Traditional

1. Retrofiton Resale Ordinanceis in Place

Yes

No

If Yes, Choose A File (Enter the file name and Email file to Natalie@cuwcc.org)

2. A 75% Market Saturation Achieved

Yes

No

If yes, Choose A File (Enter the file name and Email file to Natalie@cuwcc.org)

3. WSS Toilets Installed

Single Family

Multi Family

Number of WSS Toilets Installed

Measured Water Savings AF/YR

Flex Track

4. Non-WSS Toilets

Single Family

Multi Family

Type of Toilets

Number of Toilets

Water Savings

Number of Toilets

Water Savings

Description of Other Non-WSS Type of Toilets

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

D) WSS for New Residential Development

(Agency must complete information for at least one coverage option.You are encouraged to include information on other coverageoptions, as available. If seeking credit for additional water savings you must select the Flex Track option)

Traditional

	Single Family		Multi Family	
Residential development Rebates	Yes	No	Yes	No
Recognition Programs	Yes	No	Yes	No
Reduced connection Fees	Yes	No	Yes	No
Ordinances	Yes	No	Yes	No

New Development Ordinance  
(Enter the file name and Email file to Natalie@cuwcc.org)

Number of new Single Family Units built in Service Area

Number of new Multi Family Units built in Service Area

In the following table, enter one row for each incentive typr program you offer

List of Incentive Amount

Incentive Type	Incentive Amount	Number of WSS fixtures installed	Number of Participating		Measured Water Savings	
			Single Family	Multi Family	Single Family	Multi Family

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the le name and Email to Natalie@cuwcc.org

Flex Track

For Traditional Option, Stop Here, do not go further.  
For Flex Track Option, please continue...

Flex Track Menu Options

In addition to the measures on the BMP List, the Flex Track menu options may be implemented to meet the savings goal for this BMP. Fill in the water savings measures that your agency has implemented.

## **E) High bill contact with single-family and multi-family customers**

**Measured  
water savings  
(AF/Year)**

Select the Types of Contact:

Email

Phone

Letter

Others (describe)

Upload sample of contact contents (email, letter, etc. )

– if applicable; enter the file name and email file to Natalie@cuwcc.org

Who initiated the contact:

(Please Specify customer, agencies, or both)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

## **F) Educate residential customers about the behavioral aspects of water conservation**

**Measured  
water savings  
(AF/Year)**

**Select types of educational  
methods used:**

**# Events**

**# Customers Reached**

Workshop

Community Event

Letter

On-Site Visit

Phone Call

Water Survey

Website Hit

Door Hanger

Other (Describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

## **G) Notify residential customers of leaks on the customer's side of the meter**

Measured  
water savings  
(AF/Year)

Type of Notification (Describe)

How many were sent out?

Upload sample notification method(email, letter, etc. ) – if applicable

(Enter the file name and Email file to Natalie@cuwcc.org)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

### H) Provide bill or surcharge refunds for customers to repair leaks on the customer's side of the meter.

AF/Year  
Number of Leaks Repaired  
Number of bill adjustments/credits/refunds provided  
fB: #WUFL

Number of Leaks Repaired

Number of bill adjustments/credits/refunds provided

Describe here or upload a document with a policy description below:

Upload file describing Policy (Enter the file name and Email file to Natalie@cuwcc.org)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

---

### I) Provide unique water savings fixtures that are not included in the BMP list above

Fixture or Device

Description

Quantity Installed

Measured water  
savings (AF/YR)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**J) Install residence water use monitors.**

Type of Monitor	6 fUbX	Number Installed	Measured water savings (AF/Year)
Dashboard			
Leak Detector			
Data Logger			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**K) Participate in programs that provide residences with school water conservation kits.**

Number of Kits Distributed		
Kit contents (including model of fixtures)		
List of what was actually installed in the homes (number of showerheads, aerators etc.).		Measured water savings (AF/Year)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**L) Implement an automatic meter reading program for residential customers.**

AMR or AMI	Type of Network	
Number of connections installed		Measured water savings (AF/Year)
Is your agency using these to contact high water-use customers?		

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)



**OTHER Types of Measures.**

Type of Program

Sample / Description

Measured Water Savings (AF/YR)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

**Comments**

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

# 2009

[Link to FAQs](#)

[View MOU](#)

## BMP 4 CII

Traditional  
(Section A - L)

Flex Track  
(All Sections)

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually in the summary cells on the right. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings was measured and that the measure was adequately tracked (i.e., all relevant data was collected) - in some cases there are specific data points also requested in the flex track data entry form which are necessary to show that the measure was implemented as described.

### CII Type of measure implemented

Traditional

#### A) High - Efficiency Toilets.

Number

Type of program      Select an Option

Other type of  
program

Measured  
water savings  
(AF/Year)

Flex Track

Do you accept the Council's  
default savings number      Yes   No  
for this measure?

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

Council's Annual Water  
Savings 0.041748  
AF per device

**B) High - Efficiency Urinals ( 0.5 gpf )**

Flex Track	Traditional	Number		Measured water savings (AF/Year)
		Type of program		
		Other type of program		
		Do you accept the Council's default savings number for this measure?		Council's Annual Water Savings 0.069086 AF per device
		Yes    No		
		If not, Please provide the following		
		Total Measured Water Savings(AF/Year)		
		Measure life (years)		
		Lifetime water savings (years)		
		If you are using your own water-savings measure, send your supporting spreadsheet		
		Enter the file name and Email to Natalie@cuwcc.org		

**C) Ultra Low Volume Urinals (0.125 gpf)**

Flex Track	Traditional	Number		Measured water savings (AF/Year)
		Type of program		
		Other type of program		
		Do you accept the Council's default savings number for this measure?		Council's Annual Water Savings 0.080603 AF per device
		Yes    No		
		If not, Please provide the following		
		Total Measured Water Savings(AF/Year)		
		Measure life (years)		
		Lifetime water savings (years)		
		If you are using your own water-savings measure, send your supporting spreadsheet		
		Enter the file name and Email to Natalie@cuwcc.org		

**D) Zero Consumption Urinals (0.0 gpf)**

Flex Track	Traditional	Number		Measured water savings (AF/Year)
		Type of program		
		Other type of program		
		Do you accept the Council's default savings number for this measure?		Yes    No

**Flex Track**

If not, Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 0.0921146  
AF per device

### E) Commercial High - Efficiency Single Load Clothes Washers

**Traditional**

Number  
Type of program  
Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for      Yes   No  
this measure ?  
If not , Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 0.116618  
AF per device

### F) Cooling Tower Conductivity Controllers.

**Traditional**

Number  
Type of program  
Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for      Yes   No  
this measure ?  
If not, Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 1.032250  
AF per device

## G) Cooling Tower pH Controllers

	Traditional	Measured water savings (AF/Year)
	<div>Number</div> <div>Type of program</div> <div>Other type of program</div>	
Flex Track	<div>Do you accept the Council's default savings number for this measure ?</div> <div>Yes No</div> <div>If not, Please provide the following:</div> <div>Total Measured Water Savings(AF/Year)</div> <div>Measure life (years)</div> <div>Lifetime water savings (years)</div> <div>If you are using your own water-savings measure, send your supporting spreadsheet</div> <div>Enter the file name and Email to Natalie@cuwcc.org</div>	<div>Council's Annual Water Savings 3.981543 AF per device</div>

## H) Connectionless Food Steamers.

	Traditional	Measured water savings (AF/Year)
	<div>Number</div> <div>Type of program <div>Select an Option</div></div> <div>Other type of program</div>	
Flex Track	<div>Do you accept the Council's default savings number for this measure ?</div> <div>Yes No</div> <div>mIf not, Please provide the following:</div> <div>Total Measured Water Savings(AF/Year)</div> <div>Measure life (years)</div> <div>Lifetime water savings (years)</div> <div>If you are using your own water-savings measure, send your supporting spreadsheet</div> <div>Enter the file name and Email to Natalie@cuwcc.org</div>	<div>Council's Annual Water Savings 0.25 AF per Steamer Compartment</div>

## I) Medical Equipment Steam Sterilizers

	Traditional	Measured water savings (AF/Year)
Flex Track	<div>Number</div> <div>Type of program <div>Select an Option</div></div> <div>Other type of program</div>	

**Flex Track**

Do you accept the Council's default savings number for this measure? Yes No

Council's Annual Water Savings 1.538 AF per device

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org

## J) Water - Efficient Ice Machines.

**Traditional**

Number

Type of program Select an Option

Other type of program

**Measured water savings (AF/Year)**

**Flex Track**

Do you accept the Council's default savings number for this measure ? Yes No  
If not, Please provide the following:

Council's Annual Water Savings 0.0834507 AF per device

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org

## K) Pressurized Water Brooms.

**Traditional**

Number

Type of program Select an Option

Other type of program

**Measured water savings (AF/Year)**

**Flex Track**

Do you accept the Council's default savings number for this measure? Yes No

Council's Annual Water Savings 0.1534 AF per device

**Flex Track**

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

### **L) Dry Vacuum Pumps.**

**Traditional**

Number

Type of program      Select an Option

Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for  
this measure ?      Yes   No

If not, Please provide the following:

Council's Annual Water  
Savings   0.064  
AF per device

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Traditional Reporting Stop Here, Do not continue**

**Flex Track Reporting Please Continue...**

### **M) Industrial Process Water Use Reduction.**

Number

Type of program

Other type of  
program

**Measured  
water savings  
(AF/Year)**

Type of Process  
Water Reduced

If re-using water,  
what was the secondary  
use of the water?  
(such as pre-rince  
cycle or landscaping)

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**N) Commercial Laundry Retrofits.**

Number of customers				<b>Measured water savings (AF/Year)</b>
Type of customer	hotels campuses prisons laundromats			
Lease / own machines	Lease	Own Machines	Both	
Type of program	Select an Option			
Other type of program				

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**O) Industrial Laundry Retrofits.**

Total Number of customers				<b>Measured water savings (AF/Year)</b>
Total Volume of laundry processed annually	Select an Option			
Type of program	Select an Option			



Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**P) Filter Upgrades (for pools, spas, and fountains).**

Number of pools  
upgraded

Number of spas  
upgraded

Number of  
fountains  
upgraded

Type of program      Select an Option

Other type of  
program

**Measured  
water savings  
(AF/Year)**

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Q) Car Wash Reclamation Systems**

**Measured  
water savings  
(AF/Year)**

	Conveyor	In-bay
Total Number of program participants (accounts)		
Total Number of vehicles washed annually		
Do you accept the Council's default savings number for this measure?	Yes No	
If not, Please provide the following:		
Total Measured Water Savings(AF/Year)		
Measure life (years)		
Lifetime water savings (years)		
If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org		

Council's Annual Water Savings 0.00004607 (or 15 gals) per vehicle

R) Wet Cleaning.

Brief description of program	Measured water savings (AF/Year)
Total Measured Water Savings(AF/Year)	
Measure life (years)	
Lifetime water savings (years)	
If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org	

S) Water Audits (To avoid double counting, do not include device/replacement water savings.)

Number of water audits by type of business	Measured water savings (AF/Year)
Auto	
Food	
Health	
Hotels	

Manufacturing  
Membership  
Multi-use  
Office  
Religious  
Restaurant  
Retail/  
Wholesale  
School  
Other (with  
description)  
Description of  
Other

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

**T) Clean In Place (CIP) Technology**  
**(such as bottle sterilization in a beverage processing plant)**

**Measured  
water savings  
(AF/Year)**

Number of  
customers  
Type of program  
Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

U) Waterless Wok

Number	Measured water savings (AF/Year)
Type of program	

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

V) Alternative On-site Water Sources  
(For Rain Water Harvesting, commercial  
rain barrels are excluded. For Foundation Drain  
Water, exclude permeable paving.)

Measured  
water savings  
(AF/Year)

Select type	Number	Description
Cooling Condensate		
Foundation Drain Water		
Gray Water		
Storm Water		
Rain Water		
Pond and Water Feature Recycling		

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

W) Sub - metering

Measured water savings (AF/Year)

Select type	Number	Description
Condominiums		
Apartments		
Mobile Homes		

Do you accept the Council's default savings numbers for this measure?

Yes No

If not, Please provide the following:

Council's Annual Water Savings  
Appartments & Condos=0.024419 AF/YR  
Mobile Home = 0.056774 AF/Yr

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

X) High Efficiency Showerheads

Measured water savings (AF/Year)

Number

Type of program

Other type of program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Y) Faucet Flow Restrictors**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Z) Water Efficient Dishwashers**

**Measured  
water savings  
(AF/Year)**

Select type	Number
Rack	
Conveyor	
Other	
Description of Other	
Type of program	Select an Option

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

### **AA) Hot Water on Demand**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

### **BB) Pre-rinse Spray Valves of 1.3 gpm (gallons per minute) or less**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

### CC) Central Flush Systems

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

### Other Measures chosen by the Agency

**Measured  
water savings  
(AF/Year)**

Description of  
program

Sample (if  
applicable)

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org





The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

# 2009

## BMP 5 Landscape

[Link to FAQs](#)

[View MOU](#)

### Traditional

### Flex Track

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings were measured and that the measure was adequately tracked ( i.e., all relevant data was collected ) - in some cases there are specific data point also requested in form which are necessary to show that the measure was implemented as described.

### Accounts with Dedicated Irrigation Meters

Traditional

Number of dedicated irrigation meter accounts

Number of dedicated irrigation meter accounts  
with water budgets

Aggregate water use for dedicated non-recreational  
landscape accounts with budgets

Aggregate acreage assigned water budgets for dedicated  
non-recreational landscape accounts with budgets

Preserved water use records and budgets for  
customers with dedicated landscape  
irrigation accounts for at least four years

Yes No

Flex Track

Water Savings from Accounts with dedicated irrigation  
meters with water budgets (Acre Feet)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

### Technical Assistance

Traditional

Number of Accounts 20% over-budget

Number of accounts 20% over-budget  
offered technical assistance

Number of accounts 20% over-budget  
accepting technical assistance

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

Flex Track

Measured  
water savings  
(AF/Year)

Irrigation Water Use Surveys for Mixed-use and Un-metered Accounts

Flex Track	Traditional	<div><p>Number of mixed use and un-metered accounts</p><p>Number of irrigation water use surveys offered (cumulative, all years)</p><p>Number of irrigation water use surveys accepted (cumulative)</p><p>Can your Agency estimate the amount of landscape acreage for mixed use and Un-metered accounts</p><p>If Yes, Aggregate acreage for mixed use and Un-metered accounts</p></div>	<div><p>Yes</p><p>No</p></div>	Measured water savings (AF/Year)
		<div><p>Estimated water demand from acreage for mixed use and Un-metered accounts</p><p>Annual water savings by customers receiving irrigation water savings surveys and implementing recommendations</p><p>If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)</p></div>		

Financial Incentives

Flex Track	Traditional	<div><p>Have you implemented and maintained an irrigation equipment retrofit incentive program?</p><p>Number of incentives</p><p>Dollar value of incentives</p><p>Incentive Types</p></div>	<div><p>Yes</p><p>No</p></div>	Measured Water Savings (AF/YR)
		<div><p>If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)</p></div>		

Traditional Reporting Stop Here, Do not continue  
Flex Track Reporting Please Continue...

# Landscape Flex Track Measure Types

## 1. Monitor and report on landscape water use

- A) Measure landscapes and develop water budgets for customers with dedicated landscape meters. Provide timely water use reports with comparisons of water use to budget that provide customers the information they need to adjust irrigation schedules (such as faxes, twitter, etc. not included in the previous sections).**

**Measured  
water savings  
(AF/Year)**

Enter the Number of sites with:

Dedicated Mixed Meters

Water Budgets

Landscape Measurements

Others (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

- B) Measure landscapes and develop water budgets for customers with Mixed Use meters. Provide timely water use reports with comparisons of water use to budget that provide customers the information they need to adjust irrigation schedules.**

**Measured  
water savings  
(AF/Year)**

Enter the Number of sites with:

Dedicated Mixed Meters

Water Budgets

Landscape Measurements

Others (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

- C) Establish agency-wide water budget. (Note that: ETo based water budget in the MWELO changed in 2010 from .8ETo to .7ETo.)**

Agency-wide total irrigated area

(Acres)

**Measured  
water savings  
(AF/Year)**

Amount of Water Used

(AF/Acre)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**D) Establish agency-wide, sector-based irrigation goal to reduce water use, based on seasonality.**

Number of minimum irrigation goal	(AF/Acre)	<b>Measured water savings (AF/Year)</b>
Amount of Water Used per Period	(AF/Period)	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**2. Provide technical landscape resources and training**

**A) Upon customer requests, provide landscape irrigation management and landscape design information and resources: provide assistance, answer customer questions, respond to run-off and high-bill calls.**

Enter the Number of:	<b>Measured water savings (AF/Year)</b>
Contacts In Person	
Contacts over the phone	
Contacts via Email	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**B) Perform landscape & irrigation audits: including irrigation scheduling, plant information, and landscape area measurement.**

Enter the Number of:	<b>Measured water savings (AF/Year)</b>
Audits conducted per year	
Measurement of square footage of Turf areas	
Measurement of square footage of NON Turf areas	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**C) Sponsor, co-sponsor, promote, or support landscape workshops, training, presentations and other technical educational events for homeowners and professionals: design, installation, maintenance, water management.**

Enter the Number of:	Measured water savings (AF/Year)
Events	
Participants	
List Type or Title of Events	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**D) Establish Time-of-Day Irrigation Restrictions.**

	<b>Yes</b>	<b>No</b>	Measured water savings (AF/Year)
Describe Restrictions:			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**E) Establish Day-of-Week Irrigation Restrictions.**

	<b>Yes</b>	<b>No</b>	Measured water savings (AF/Year)
Describe Restrictions:			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**3. Provide incentives**

A) Establish Landscape budget-based rates.

YesNo

Describe Rates:

Measured  
water savings  
(AF/Year)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

B) Provide incentives for conversions from mixed-use meters to dedicated landscape meters.

Measured  
water savings  
(AF/Year)

Number of Conversions:

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

C) Provide incentives for installing sub-meters to separate landscape water use

Number of meters installed:

AYUgj fYX  
k UHYf'gUJ ]b[ g  
fE: #WUfL

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

D) Provide incentives for irrigation equipment upgrades that improve distribution uniformity, irrigation efficiency, or scheduling capabilities.

Select types of irrigation  
equipment upgrades:

Number of devices  
installed

Measured  
water savings  
(AF/Year)

Controllers

Emitters

Soil moisture sensors

Pressure Regulators

Rain shut off devices

Other (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**E) Provide incentives for the reduction of water use over an irrigated area, or reduction in the size of the irrigated area due to replacement of turf or other high water-using plants with low water-using plants, artificial turf, or permeable surfaces.**

Acreage of live turf converted to low water-using plants, artificial turf, or permeable surfaces:	Acres	Measured water savings (AF/Year)
---	-------	----------------------------------

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**F) Provide incentives for conversions from potable to recycled water.**

Number of Conversions:	Measured water savings (AF/Year)
Number of Incentives:	
Funds Invested:	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**G) Provide incentives for the use of alternative sources of water in the landscape (i.e. gray water, rainwater, cisterns, etc.)**

Number of Conversions:	Measured water savings (AF/Year)
Number of Incentives:	
Funds Invested:	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

4. Participate in local and regional planning and regulatory activities

A) Collaborate with planning agencies at the local and regional level, other water suppliers in the area and stakeholders in response to state or federal requirements such as the State Model Water Efficient Landscape Ordinance and AB 1881. Participate in the development, review, implementation, and enforcement of requirements for new developments. Provide water use data to planning agencies.

				Measured water savings (AF/Year)
Public Information Programs List				
Agency Type	Describe Involvement	If Ohter: Enter Name		Actions

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)

B) Establish or participate in a water conservation advisory committee or other community outreach effort to drive market transformation and exchange information about landscape water conservation with developers, community-based organizations, homeowners associations, residential customers, landscape professionals, educators, other water suppliers in region.

Yes No

Describe Involvement:

Measured  
water savings  
(AF/Year)



If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**C) Participate in regional efforts: integrated water resource management, watershed management, NPDES permit agencies, etc.**

**Yes      No**

**Measured  
water savings  
(AF/Year)**

Describe Involvement:

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**5. Develop a holistic approach to landscape water use efficiency**

**A) Develop and implement a comprehensive landscape water conservation program for all customers. Target marketing efforts to those most likely to result in benefits to both customer and Agency.**

Describe Program:

**Measured  
water savings  
(AF/Year)**

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**6. Other Measures**

**A) Other Landscape Measures.**

Describe Other  
Landscape Measures:

**Measured  
water savings  
(Af/Year)**

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file Natalie@cuwcc.org)



The fields in red are required.

Agency name:

Division name  
(Reporting unit)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:



2010

Service Area Population:

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail, etc.
---------------------	---------	--

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	----------------	-------------------------	---------------------	----------------------------	-------------

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name  
(Reporting unit)

Last name:

Reporting unit number:

Email:



## WATER SOURCES

# 2010

Service Area Population:

### Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported?
---------------------	---------	-----------------

The fields in red are required.

Agency name:

Division name  
(Reporting unit)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:



# Water Uses

# 2010

## Potable Water Billed

Make sure to enter numbers in AF/Year.



Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	-------------------	-------------------------------	------------------------	-------------------------------	-------------

0

## Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
---------------	-------------------	-------------------------------	------------------------	-------------------------------	-------------

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[See the complete MOU:](#)

[View MOU](#)

[See the coverage requirements for this BMP:](#)



## Conservation Coordinator

Conservation Coordinator      Yes      No

## Contact Information

First Name

Last Name

Title

Phone

Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

## Water Waste Prevention

Water Agency shall do one or more of the following:

- Enact and enforce an ordinance or establish terms of service that prohibit water waste
- Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- Support legislation or regulations that prohibit water waste
- Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- Support local ordinances that prohibit water waste
- Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- A description of, or electronic link to, any ordinances or terms of service
- A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- description of agency support positions with respect to adoption of legislation or regulations

**You can show your documentation by providing files, links (web addresses), and/or entering a description.**



**File name(s):** Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

**Web address(s) URL:** comma-separated list

**Enter a description:**

# 2010

## BMP 1.1 Operations Practices

**Comments:**

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

# 2010

## BMP 1.2 Water Loss Control

[View MOU](#)



### AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software Yes No  
Email to [natalie@cuwcc.org](mailto:natalie@cuwcc.org) - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score  
from AWWA spreadsheet



Agency Completed Training In The AWWA Water Audit Method  
Agency Completed Training In The Component Analysis Process

Yes No  
Yes No



Completed/Updated the Component Analysis (at least every 4 years)?

Yes No



Component Analysis Completed/Updated Date

### Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective Yes No

### Recording Keeping Requirements:

Date/Time Leak Reported	Leak Location
Type of Leaking Pipe Segment or Fitting	Leak Running Time From Report to Repair
Leak Volume Estimate	Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective Yes No

Type of Program Activities Used to Detect Unreported Leaks

### Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of AppUFYbhLoss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)
----------------------	-----------------------------	--------------------------------	------------------------------------	--	-----------------------	-----------------------

Comments:



The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



## BMP 1.3 Metering with Commodity 2010

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

### Implementation

Does your agency have any unmetered service connections? Yes No

If YES, has your agency completed a meter retrofit plan? Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? Yes No

Are all new service connections being billed volumetrically? Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

### Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
--------------	--------------------	-------------------------	-------------------------------------	----------------------------	-------------------------

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

### Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes No

#### If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

Comments:

The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



2010

[Link to FAQs](#)

[View MOU](#)

## BMP 1.4 Retail Conservation Pricing

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to [natalie@cuwcc.org](mailto:natalie@cuwcc.org).

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

### Implementation Option (Conservation Pricing Option)

Use Annual Revenue As Reported  
Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service

Yes No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Comments:

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

2010

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

Number of Public Contacts		Public Information Programs	

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

#### Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types	

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? Yes No

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Did at least one Website Update take place during each quarter of the reporting year? Yes No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	

Comments:

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

2010

## BMP 2.1 Public Outreach Cont'd

### Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
If yes, check the check box.			

### Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? Yes No

### Public Outreach Additional Information

Public Information Programs	Importance	

### Social Marketing Programs

#### Branding

Does your agency have a water conservation "brand," "theme" or mascot? Yes No

Describe the brand, theme or mascot.

#### Market Research

Have you sponsored or participated in market research to refine your message? Yes No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? Yes No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description	

Partnering Programs - Partners

- NameType of Program
- CLCA?
- Green Building Programs?
- Master Gardeners?
- Cooperative Extension?
- Local Colleges?
- Other

Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

### **Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

### **Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

### **Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Comments:

The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

2010

BMP 2.2 School Education Programs, Retail Agencies

School Programs

[Link to FAQs](#)

[View MOU](#)

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?

Yes No

Enter Wholesaler Names, separated by commas:

Materials meet state education framework requirements?

Description of Materials

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

School Program Activities

Classroom presentations:

Number of presentations

Number of attendees

Large group assemblies:

Number of presentations

Number of attendees

Children’s water festivals or other events:

Number of presentations

Number of attendees

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):



Description

Number distributed

**Staffing children's booths at events & festivals:**

Number of booths

Number of attendees

**Water conservation contests such as poster and photo:**

Description

Number distributed

**Offer monetary awards/funding or scholarships to students:**

Number Offered

Total Funding

**Teacher training workshops:**

Number of presentations

Number of attendees

**Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:**

Number of tours or field trips

Number of participants

**College internships in water conservation offered:**

Number of internships

Total funding

**Career fairs/workshops:**

Number of presentations

Number of attendees

**Additional program(s) supported by agency but not mentioned above:**

Description

Number of events (if applicable)

Number of participants

**Total reporting period budget expenditures for school education programs (include all agency costs):**

Comments

The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



[Link to FAQs](#)

[View MOU](#)

# 2010

## BMP 3 Residential

### Traditional (Sections A - D)

### Flex Track (All Sections)

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings were measured and that the measure was adequately tracked ( i.e., all relevant data was collected ) - in some cases there are specific data points also requested in form which are necessary to show that the measure was implemented as described.

### A) Residential Assistance / Leak Detection

	Single Family	Multi Family	Total Water Savings AF/YR	Measured Water Savings AF/YR
<b>Traditional</b>	Total Number of Accounts			
	Total Number of Participants Overall			
	Total Number of Leak Det Surveys			
	Total Number of Showerheads			
	Total Number of Faucet Aerators			
	Total Number of Landscape Water Survey			
	Number of Other Components			
	Description of Other Components Distributed			
If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)				

### B) High Efficiency Clothes Washers (HECWs)

<b>Flex Track</b>	<b>Traditional</b>	Number of incentives for HECWs with an AVERAGE Water Factor of 5.0			
		Are Financial incentives provided for HECWs ?		Yes	No
		Has your Agency completed a HECW Market Penetration Study (this question does not impact your coverage report, purely informational)		Yes	No
		HECW Market Penetration Study Documents (Enter the file name and Email file to Natalie@cuwcc.org)			
				<b>Measured water savings (AF/Year)</b>	

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

C) WaterSense Specification (WSS) Toilets

(Agency must complete information for at least one coverage option (For Traditional 1, 2, or 3; For Flex Tarck 1, 2, 3, or 4).  
You are encouraged to include information on other coverage options, as available.  
If seeking credit for additional water savings, you must select Flex Track option)

Traditional	1. Retrofiton Resale Ordinanceis in Place		Yes	No	
	If Yes, Choose A File (Enter the file name and Email file to Natalie@cuwcc.org)				
Flex Track	2. A 75% Market Saturation Achieved		Yes	No	
	If yes, Choose A File (Enter the file name and Email file to Natalie@cuwcc.org)				
	3. WSS Toilets Installed				
		Single Family	Multi Family		
	Number of WSS Toilets Installed				
	Measured Water Savings AF/YR				
	4. Non-WSS Toilets				
		Single Family	Multi Family		
	Type of Toilets	Number of Toilets	Water Savings	Number of Toilets	Water Savings
	Description of Other Non-WSS Type of Toilets				
	If you are using your own water-savings measure, send your supporting spreadsheet				
	Enter the file name and Email to Natalie@cuwcc.org				

D) WSS for New Residential Development

(Agency must complete information for at least one coverage option.You are encouraged to include information on other coverageoptions, as available. If seeking credit for additional water savings you must select the Flex Track option)

Traditional

	Single Family		Multi Family	
Residential development Rebates	Yes	No	Yes	No
Recognition Programs	Yes	No	Yes	No
Reduced connection Fees	Yes	No	Yes	No
Ordinances	Yes	No	Yes	No

New Development Ordinance  
(Enter the file name and Email file to Natalie@cuwcc.org)

Number of new Single Family Units built in Service Area

Number of new Multi Family Units built in Service Area

In the following table, enter one row for each incentive typr program you offer

List of Incentive Amount

Incentive Type	Incentive Amount	Number of WSS fixtures installed	Number of Participating		Measured Water Savings	
			Single Family	Multi Family	Single Family	Multi Family

Flex Track

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

For Traditional Option, Stop Here, do not go further.

For Flex Track Option, please continue...

## Flex Track Menu Options

In addition to the measures on the BMP List, the Flex Track menu options may be implemented to meet the savings goal for this BMP. Fill in the water savings measures that your agency has implemented.

## **E) High bill contact with single-family and multi-family customers**

**Measured  
water savings  
(AF/Year)**

Select the Types of Contact:

Email

Phone

Letter

Others (describe)

Upload sample of contact contents (email, letter, etc. )

– if applicable; enter the file name and email file to Natalie@cuwcc.org

Who initiated the contact:

(Please Specify customer, agencies, or both)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

## **F) Educate residential customers about the behavioral aspects of water conservation**

**Measured  
water savings  
(AF/Year)**

**Select types of educational  
methods used:**

**# Events**

**# Customers Reached**

Workshop

Community Event

Letter

On-Site Visit

Phone Call

Water Survey

Website Hit

Door Hanger

Other (Describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

## **G) Notify residential customers of leaks on the customer's side of the meter**

Measured  
water savings  
(AF/Year)

Type of Notification (Describe)

How many were sent out?

Upload sample notification method(email, letter, etc. ) – if applicable

(Enter the file name and Email file to Natalie@cuwcc.org)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)

(Enter the file name and Email file to Natalie@cuwcc.org)

---

### H) Provide bill or surcharge refunds for customers to repair leaks on the customer's side of the meter.

AF/Year  
Number of Leaks Repaired  
Number of bill adjustments/credits/refunds provided  
fB: #WUFL

Number of Leaks Repaired

Number of bill adjustments/credits/refunds provided

Describe here or upload a document with a policy description below:

Upload file describing Policy (Enter the file name and Email file to Natalie@cuwcc.org)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

---

### I) Provide unique water savings fixtures that are not included in the BMP list above

Fixture or Device

Description

Quantity Installed

Measured water  
savings (AF/YR)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**J) Install residence water use monitors.**

Type of Monitor	6 fUbX	Number Installed	Measured water savings (AF/Year)
Dashboard			
Leak Detector			
Data Logger			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**K) Participate in programs that provide residences with school water conservation kits.**

Number of Kits Distributed			
Kit contents (including model of fixtures)			
List of what was actually installed in the homes (number of showerheads, aerators etc.).			Measured water savings (AF/Year)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**L) Implement an automatic meter reading program for residential customers.**

AMR or AMI	Type of Network		
Number of connections installed			Measured water savings (AF/Year)
Is your agency using these to contact high water-use customers?			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

**OTHER Types of Measures.**

Type of Program

Sample / Description

Measured Water Savings (AF/YR)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

**Comments**



The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

# 2010

[Link to FAQs](#)

[View MOU](#)

## BMP 4 CII

Traditional  
(Section A - L)

Flex Track  
(All Sections)

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually in the summary cells on the right. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings was measured and that the measure was adequately tracked (i.e., all relevant data was collected) - in some cases there are specific data points also requested in the flex track data entry form which are necessary to show that the measure was implemented as described.

### CII Type of measure implemented

	Traditional	Flex Track	Measured water savings (AF/Year)
	<b>A) High - Efficiency Toilets.</b>		
	Number		
	Type of program	Select an Option	
	Other type of program		
	Do you accept the Council's default savings number for this measure?		Council's Annual Water Savings 0.041748 AF per device
	Yes No		
	If not, Please provide the following:		
	Total Measured Water Savings(AF/Year)		
	Measure life (years)		
	Lifetime water savings (years)		
	If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to <a href="mailto:Natalie@cuwcc.org">Natalie@cuwcc.org</a>		

**B) High - Efficiency Urinals ( 0.5 gpf )**

Flex Track	Traditional	Number	Measured water savings (AF/Year)
		Type of program	
		Other type of program	
		Do you accept the Council's default savings number for this measure?	Yes No
		If not, Please provide the following	
		Total Measured Water Savings(AF/Year)	
		Measure life (years)	
		Lifetime water savings (years)	
		If you are using your own water-savings measure, send your supporting spreadsheet	
		Enter the file name and Email to Natalie@cuwcc.org	
		Council's Annual Water Savings 0.069086 AF per device	

**C) Ultra Low Volume Urinals (0.125 gpf)**

Flex Track	Traditional	Number	Measured water savings (AF/Year)
		Type of program	
		Other type of program	
		Do you accept the Council's default savings number for this measure?	Yes No
		If not, Please provide the following	
		Total Measured Water Savings(AF/Year)	
		Measure life (years)	
		Lifetime water savings (years)	
		If you are using your own water-savings measure, send your supporting spreadsheet	
		Enter the file name and Email to Natalie@cuwcc.org	
		Council's Annual Water Savings 0.080603 AF per device	

**D) Zero Consumption Urinals (0.0 gpf)**

Flex Track	Traditional	Number	Measured water savings (AF/Year)
		Type of program	
		Other type of program	
		Do you accept the Council's default savings number for this measure?	Yes No

**Flex Track**

If not, Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 0.0921146  
AF per device

### E) Commercial High - Efficiency Single Load Clothes Washers

**Traditional**

Number  
Type of program  
Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for      Yes   No  
this measure ?  
If not , Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 0.116618  
AF per device

### F) Cooling Tower Conductivity Controllers.

**Traditional**

Number  
Type of program  
Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for      Yes   No  
this measure ?  
If not, Please provide the following:  
Total Measured Water Savings(AF/Year)  
Measure life (years)  
Lifetime water savings (years)  
If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

Council's Annual Water  
Savings 1.032250  
AF per device

## G) Cooling Tower pH Controllers

	Traditional	Measured water savings (AF/Year)
	<div>Number</div> <div>Type of program</div> <div>Other type of program</div>	
Flex Track	<div>Do you accept the Council's default savings number for this measure ?</div> <div>Yes No</div> <div>If not, Please provide the following:</div> <div>Total Measured Water Savings(AF/Year)</div> <div>Measure life (years)</div> <div>Lifetime water savings (years)</div> <div>If you are using your own water-savings measure, send your supporting spreadsheet</div> <div>Enter the file name and Email to Natalie@cuwcc.org</div>	<div>Council's Annual Water Savings 3.981543 AF per device</div>

## H) Connectionless Food Steamers.

	Traditional	Measured water savings (AF/Year)
	<div>Number</div> <div>Type of program <div>Select an Option</div></div> <div>Other type of program</div>	
Flex Track	<div>Do you accept the Council's default savings number for this measure ?</div> <div>Yes No</div> <div>mIf not, Please provide the following:</div> <div>Total Measured Water Savings(AF/Year)</div> <div>Measure life (years)</div> <div>Lifetime water savings (years)</div> <div>If you are using your own water-savings measure, send your supporting spreadsheet</div> <div>Enter the file name and Email to Natalie@cuwcc.org</div>	<div>Council's Annual Water Savings 0.25 AF per Steamer Compartment</div>

## I) Medical Equipment Steam Sterilizers

	Traditional	Measured water savings (AF/Year)
Flex Track	<div>Number</div> <div>Type of program <div>Select an Option</div></div> <div>Other type of program</div>	

**Flex Track**

Do you accept the Council's default savings number for this measure? Yes No

Council's Annual Water Savings 1.538 AF per device

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org

## J) Water - Efficient Ice Machines.

**Traditional**

Number

Type of program Select an Option

Other type of program

**Measured water savings (AF/Year)**

**Flex Track**

Do you accept the Council's default savings number for this measure ? Yes No

Council's Annual Water Savings 0.0834507 AF per device

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org

## K) Pressurized Water Brooms.

**Traditional**

Number

Type of program Select an Option

Other type of program

**Measured water savings (AF/Year)**

**Flex Track**

Do you accept the Council's default savings number for this measure? Yes No

Council's Annual Water Savings 0.1534 AF per device

**Flex Track**

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

### **L) Dry Vacuum Pumps.**

**Traditional**

Number

Type of program      Select an Option

Other type of  
program

**Measured  
water savings  
(AF/Year)**

**Flex Track**

Do you accept the Council's  
default savings number for  
this measure ?      Yes   No

If not, Please provide the following:

Council's Annual Water  
Savings 0.064  
AF per device

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Traditional Reporting Stop Here, Do not continue**

**Flex Track Reporting Please Continue...**

### **M) Industrial Process Water Use Reduction.**

Number

Type of program

Other type of  
program

**Measured  
water savings  
(AF/Year)**

Type of Process  
Water Reduced

If re-using water,  
what was the secondary  
use of the water?  
(such as pre-rince  
cycle or landscaping)

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**N) Commercial Laundry Retrofits.**

Number of customers				<b>Measured water savings (AF/Year)</b>
Type of customer	hotels campuses prisons laundromats			
Lease / own machines	Lease	Own Machines	Both	
Type of program	Select an Option			
Other type of program				

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**O) Industrial Laundry Retrofits.**

Total Number of customers				<b>Measured water savings (AF/Year)</b>
Total Volume of laundry processed annually	Select an Option			
Type of program	Select an Option			

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**P) Filter Upgrades (for pools, spas, and fountains).**

Number of pools  
upgraded

Number of spas  
upgraded

Number of  
fountains  
upgraded

Type of program      Select an Option

Other type of  
program

**Measured  
water savings  
(AF/Year)**

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Q) Car Wash Reclamation Systems**

**Measured  
water savings  
(AF/Year)**



Total Number of program participants (accounts)	Conveyor	In-bay
Total Number of vehicles washed annually		
Do you accept the Council's default savings number for this measure?	Yes No	Council's Annual Water Savings 0.00004607 (or 15 gals) per vehicle
If not, Please provide the following:		
Total Measured Water Savings(AF/Year)		
Measure life (years)		
Lifetime water savings (years)		
If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org		

R) Wet Cleaning.

Brief description of program	Measured water savings (AF/Year)
Total Measured Water Savings(AF/Year)	
Measure life (years)	
Lifetime water savings (years)	
If you are using your own water-savings measure, send your supporting spreadsheet Enter the file name and Email to Natalie@cuwcc.org	

S) Water Audits (To avoid double counting, do not include device/replacement water savings.)

Number of water audits by type of business	Measured water savings (AF/Year)
Auto	
Food	
Health	
Hotels	

Manufacturing  
Membership  
Multi-use  
Office  
Religious  
Restaurant  
Retail/  
Wholesale  
School  
Other (with  
description)  
Description of  
Other

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

**T) Clean In Place (CIP) Technology**  
**(such as bottle sterilization in a beverage processing plant)**

**Measured  
water savings  
(AF/Year)**

Number of  
customers  
Type of program  
Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

U) Waterless Wok

Number	Measured water savings (AF/Year)
Type of program	

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

V) Alternative On-site Water Sources  
(For Rain Water Harvesting, commercial  
rain barrels are excluded. For Foundation Drain  
Water, exclude permeable paving.)

Measured  
water savings  
(AF/Year)

Select type	Number	Description
Cooling Condensate		
Foundation Drain Water		
Gray Water		
Storm Water		
Rain Water		
Pond and Water Feature Recycling		

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

W) Sub - metering

Measured water savings (AF/Year)

Select type	Number	Description
Condominiums		
Apartments		
Mobile Homes		

Do you accept the Council's default savings numbers for this measure?	Yes	No
---	-----	----

Council's Annual Water Savings  
Appartments & Condos=0.024419 AF/YR  
Mobile Home = 0.056774 AF/Yr

If not, Please provide the following:

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

X) High Efficiency Showerheads

Measured water savings (AF/Year)

Number
Type of program
Other type of program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Y) Faucet Flow Restrictors**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to Natalie@cuwcc.org

**Z) Water Efficient Dishwashers**

**Measured  
water savings  
(AF/Year)**

Select type	Number
Rack	
Conveyor	
Other	
Description of Other	
Type of program	Select an Option

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

### **AA) Hot Water on Demand**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet  
Enter the file name and Email to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org)

### **BB) Pre-rinse Spray Valves of 1.3 gpm (gallons per minute) or less**

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

### CC) Central Flush Systems

**Measured  
water savings  
(AF/Year)**

Number

Type of program

Other type of  
program

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org

### Other Measures chosen by the Agency

**Measured  
water savings  
(AF/Year)**

Description of  
program

Sample (if  
applicable)

Total Measured Water Savings(AF/Year)

Measure life (years)

Lifetime water savings (years)

If you are using your own water-savings measure, send your supporting spreadsheet

Enter the file name and Email to Natalie@cuwcc.org



The fields in red are required.

Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2010

## BMP 5 Landscape

### Traditional

### Flex Track

For Traditional Track please answer the fields within the traditional boxes.

For Flex Track option, please answer the fields within the flex track boxes.

You must enter all measured water savings manually. For each measure entered, upload a spreadsheet with sufficient information to show the way that water savings were measured and that the measure was adequately tracked ( i.e., all relevant data was collected ) - in some cases there are specific data point also requested in form which are necessary to show that the measure was implemented as described.

### Accounts with Dedicated Irrigation Meters

Traditional

Number of dedicated irrigation meter accounts

Number of dedicated irrigation meter accounts  
with water budgets

Aggregate water use for dedicated non-recreational  
landscape accounts with budgets

Aggregate acreage assigned water budgets for dedicated  
non-recreational landscape accounts with budgets

Preserved water use records and budgets for  
customers with dedicated landscape  
irrigation accounts for at least four years

Yes No

Flex Track

Water Savings from Accounts with dedicated irrigation  
meters with water budgets (Acre Feet)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

### Technical Assistance

Traditional

Number of Accounts 20% over-budget

Number of accounts 20% over-budget  
offered technical assistance

Number of accounts 20% over-budget  
accepting technical assistance

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to [Natalie@cuwcc.org](mailto:Natalie@cuwcc.org))

Flex Track

Measured  
water savings  
(AF/Year)



Irrigation Water Use Surveys for Mixed-use and Un-metered Accounts

Flex Track	Traditional	<div><div>Number of mixed use and un-metered accounts</div><div>Number of irrigation water use surveys offered (cumulative, all years)</div><div>Number of irrigation water use surveys accepted (cumulative)</div><div>Can your Agency estimate the amount of landscape acreage for mixed use and Un-metered accounts</div><div>If Yes, Aggregate acreage for mixed use and Un-metered accounts</div></div>	Measured water savings (AF/Year)
		<div><div>Esrimated water demand from acreage for mixed use and Un-metered accounts</div><div>Annual water savings by customers receiving irrigation water savings surveys and implementing recomendations</div><div>If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)</div></div>	

Financial Incentives

Flex Track	Traditional	<div><div>Have you implemented and maintained an irrigation equipment retrofit incentive program?</div><div>Number of incentives</div><div>Dollar value of incentives</div><div>Incentive Types</div></div>	Measured Water Savings (AF/YR)
		<div><div>If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)</div></div>	

Traditional Reporting Stop Here, Do not continue  
Flex Track Reporing Please Continue...

# Landscape Flex Track Measure Types

## 1. Monitor and report on landscape water use

- A) Measure landscapes and develop water budgets for customers with dedicated landscape meters. Provide timely water use reports with comparisons of water use to budget that provide customers the information they need to adjust irrigation schedules (such as faxes, twitter, etc. not included in the previous sections).**

Measured  
water savings  
(AF/Year)

Enter the Number of sites with:

Dedicated Mixed Meters

Water Budgets

Landscape Measurements

Others (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

- B) Measure landscapes and develop water budgets for customers with Mixed Use meters. Provide timely water use reports with comparisons of water use to budget that provide customers the information they need to adjust irrigation schedules.**

Measured  
water savings  
(AF/Year)

Enter the Number of sites with:

Dedicated Mixed Meters

Water Budgets

Landscape Measurements

Others (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

- C) Establish agency-wide water budget. (Note that: ETo based water budget in the MWELO changed in 2010 from .8ETo to .7ETo.)**

Agency-wide total irrigated area		Measured water savings (AF/Year)
Per-2010	(Acres)	
Agency-wide totak irrigated area	(Acres)	
Post-2010		
Amount of Water Used	(AF/Acre)	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**D) Establish agency-wide, sector-based irrigation goal to reduce water use, based on seasonality.**

Number of minimum irrigation goal	(AF/Acre)	<b>Measured water savings (AF/Year)</b>
Amount of Water Used per Period	(AF/Period)	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**2. Provide technical landscape resources and training**

**A) Upon customer requests, provide landscape irrigation management and landscape design information and resources: provide assistance, answer customer questions, respond to run-off and high-bill calls.**

Enter the Number of:	<b>Measured water savings (AF/Year)</b>
Contacts In Person	
Contacts over the phone	
Contacts via Email	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**B) Perform landscape & irrigation audits: including irrigation scheduling, plant information, and landscape area measurement.**

Enter the Number of:	<b>Measured water savings (AF/Year)</b>
Audits conducted per year	
Measurement of square footage of Turf areas	
Measurement of square footage of NON Turf areas	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**C) Sponsor, co-sponsor, promote, or support landscape workshops, training, presentations and other technical educational events for homeowners and professionals: design, installation, maintenance, water management.**

Enter the Number of:	Measured water savings (AF/Year)
Events	
Participants	
List Type or Title of Events	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**D) Establish Time-of-Day Irrigation Restrictions.**

	Yes	No	Measured water savings (AF/Year)
Describe Restrictions:			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**E) Establish Day-of-Week Irrigation Restrictions.**

	Yes	No	Measured water savings (AF/Year)
Describe Restrictions:			

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**3. Provide incentives**

A) Establish Landscape budget-based rates.

YesNo

Describe Rates:

Measured  
water savings  
(AF/Year)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

B) Provide incentives for conversions from mixed-use meters to dedicated landscape meters.

Measured  
water savings  
(AF/Year)

Number of Conversions:

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

C) Provide incentives for installing sub-meters to separate landscape water use

Number of meters installed:

AYUgj fYX  
k UHYf'gUJ ]b[ g  
fE: #WUfL

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

D) Provide incentives for irrigation equipment upgrades that improve distribution uniformity, irrigation efficiency, or scheduling capabilities.

Select types of irrigation  
equipment upgrades:

Number of devices  
installed

Measured  
water savings  
(AF/Year)

Controllers

Emitters

Soil moisture sensors

Pressure Regulators

Rain shut off devices

Other (describe)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**E) Provide incentives for the reduction of water use over an irrigated area, or reduction in the size of the irrigated area due to replacement of turf or other high water-using plants with low water-using plants, artificial turf, or permeable surfaces.**

Acreage of live turf converted to low water-using plants, artificial turf, or permeable surfaces:	Acres	Measured water savings (AF/Year)
---	-------	----------------------------------

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**F) Provide incentives for conversions from potable to recycled water.**

Number of Conversions:	Measured water savings (AF/Year)
Number of Incentives:	
Funds Invested:	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**G) Provide incentives for the use of alternative sources of water in the landscape (i.e. gray water, rainwater, cisterns, etc.)**

Number of Conversions:	Measured water savings (AF/Year)
Number of Incentives:	
Funds Invested:	

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

4. Participate in local and regional planning and regulatory activities

A) Collaborate with planning agencies at the local and regional level, other water suppliers in the area and stakeholders in response to state or federal requirements such as the State Model Water Efficient Landscape Ordinance and AB 1881. Participate in the development, review, implementation, and enforcement of requirements for new developments. Provide water use data to planning agencies.

				Measured water savings (AF/Year)
Public Information Programs List				
Agency Type	Describe Involvement	If Ohter: Enter Name		Actions

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data) (Enter the file name and Email file to Natalie@cuwcc.org)

B) Establish or participate in a water conservation advisory committee or other community outreach effort to drive market transformation and exchange information about landscape water conservation with developers, community-based organizations, homeowners associations, residential customers, landscape professionals, educators, other water suppliers in region.

Yes No

Describe Involvement:

Measured  
water savings  
(AF/Year)

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**C) Participate in regional efforts: integrated water resource management, watershed management, NPDES permit agencies, etc.**

**Yes      No**

**Measured  
water savings  
(AF/Year)**

Describe Involvement:

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**5. Develop a holistic approach to landscape water use efficiency**

**A) Develop and implement a comprehensive landscape water conservation program for all customers. Target marketing efforts to those most likely to result in benefits to both customer and Agency.**

Describe Program:

**Measured  
water savings  
(AF/Year)**

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file to Natalie@cuwcc.org)

---

**6. Other Measures**

**A) Other Landscape Measures.**

Describe Other  
Landscape Measures:

**Measured  
water savings  
(Af/Year)**

If there is Water Savings in this measure, upload the Methodology Spreadsheet (backup data)  
(Enter the file name and Email file Natalie@cuwcc.org)



## **Appendix G**

### **Ventura County Waterworks District No. 1 Rules and Regulations for Water Service, Section K – Water Shortages; Section L – Permanent Water Conservation Measures**

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## **PART 1 - SECTION K - WATER SHORTAGES**<sup>176</sup>

### **RULE**

#### **1-K-1      EMERGENCY RESTRICTIONS ON WATER USE:**<sup>176</sup>

##### **1-K-1a      EMERGENCY RESTRICTIONS ON WATER USE DUE TO SYSTEM EMERGENCIES:**<sup>176</sup> If the Director determines that over-consumption of water, loss of pressure in a system, breakdown, or any similar occurrence, requires emergency restrictions upon the use of water from any system, the Director shall order such restrictions as the Director in his or her sole discretion, deems appropriate under the circumstances.

Such order may restrict the use of water for sprinkling, manufacturing, or nonessential uses. The use of water for particular purposes may be limited to specified days or hours of a day or altogether prohibited, except that the use of water for drinking, cooking, and sanitary purposes shall not be prohibited.

Notice of any such order shall be given, either in writing or orally when possible, to customers served by the affected system. Water supply to any premises upon which the use of water is being made in violation of such order may be summarily shut off.

When the Director determines that the emergency no longer exists, The Director shall, by further order, rescind the restrictions previously ordered under this section. Notice of such order shall be given to customers in the same manner in which the order imposing the restrictions was given.

##### **1-K-1b      EMERGENCY RESTRICTIONS ON WATER USE DUE TO OTHER THAN SYSTEM EMERGENCIES:**<sup>176</sup> If the Engineer determines that circumstances other than those specified elsewhere in Section K (such as natural disaster, epidemic, accident, war, other violent activity, labor dispute, civil disturbance or state or federal statute or executive or judicial order) require emergency restrictions upon the use of water from any system, the Engineer shall order such restrictions as the Engineer in his or her sole discretion, deems appropriate under the circumstances, and then shall obtain ratification of the order from the Districts' Board at its first meeting following such restriction order.

Such order may restrict the use of water for sprinkling, manufacturing, or nonessential uses. The use of water for particular purposes may be limited to specified days or hours of a day or altogether prohibited, except that the use of water for drinking, cooking, and sanitary purposes shall not be prohibited.

Notice of any such order shall be given, either in writing or orally when possible, to customers served by the affected system. Water supply to any premises upon which the use of water is being made in violation of such order may be summarily shut off.

When the Engineer determines that the emergency no longer exists, The Engineer shall, by further order, rescind the restrictions previously ordered under this section. Notice of such order shall be given to customers in the same manner in which the order imposing the restrictions was given.

1-K-2

**LEVEL 1 WATER SUPPLY SHORTAGE**

1-K-2a

A Level 1 Water Supply Shortage exists when the Engineer determines in his or her sole discretion that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists, and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the Engineer of a Level 1 Water Supply Shortage condition, the Director shall implement the mandatory Level 1 conservation measures identified in this section, effective on the date determined by the Director.

176

1-K-2b

In addition to the prohibited uses of water identified in Part 1 - Section L – Permanent Water Conservation Measures, the following water conservation measures apply during a declared Level 1 Water Supply Shortage.

- (i) Exterior Water Use: The District will implement Incremental Interruption Plan Level 2 allocations and water rates to achieve the desired reduction in exterior water use. 176

1-K-3

**LEVEL 2 WATER SUPPLY SHORTAGE** 176

1-K-3a

A Level 2 Water Supply Shortage exists when the Engineer determines in his or her sole discretion that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists, and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the Engineer of a Level 2 Water Supply Shortage condition, the Director shall implement the mandatory Level 2 conservation measures identified in this section, effective on the date determined by the Director.

1-K-3b

In addition to the prohibited uses of water identified in Part 1 – Section K – Rule 1-K-2, Level 1 Water Supply Shortage, and Part 1 – Section L – Permanent Water Conservation Restrictions, the following water conservation measures apply during a declared Level 2 Water Supply Shortage:

- (i) Exterior Water Use: District will implement Incremental Interruption Plan Level 2 allocations and water rates to achieve the desired reduction in exterior water use.
- (ii) Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior

to the declaration of a supply shortage level under these Rules and Regulations.

- (iii) **Limits on Washing Vehicles:** Using water to wash or clean a vehicle is prohibited, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, by high pressure/low volume wash systems, or at a commercial car washing facility that utilizes a re-circulating water system to capture or reuse water.
- (iv) **Limits on Filling Residential Swimming Pools and Spas:** Re-filling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

**1-K-4      LEVEL 3 WATER SUPPLY SHORTAGE – EMERGENCY CONDITION**<sup>176</sup>

**1-K-4a**      A Level 3 Water Supply Shortage condition is also referred to as an "Emergency" condition. A Level 3 condition exists when the Engineer determines that a significant reduction in consumer demand is necessary to maintain sufficient water supplies for public health and safety, declares a water shortage emergency and notifies District residents and businesses of the emergency. Upon the declaration by the Engineer of a Level 3 Water Supply Shortage condition, the Director shall implement the mandatory Level 3 emergency conservation measures identified in this section, effective on the date determined by the Director.

**1-K-4b**      In addition to the prohibited uses of water identified in Part 1 – Section K – Rules 1-K-2, Level 1 Water Supply Shortage, and 1-K-3, Level 2 Water Supply Shortage, and Part 1 – Section L – Permanent Water Conservation Restrictions, the following water conservation measures apply during a declared Level 3 Water Supply Shortage Emergency:

- (i) **No Watering or Irrigating:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use, unless it is determined by the Director that recycled water is available and may be applied to the use:
  - a. Maintenance of vegetation, including trees and shrubs, that are watered using a hand-held bucket or similar container or hand-held hose equipped with a positive self-closing water shutoff nozzle or device.
  - b. Maintenance of existing landscape necessary for fire protection.
  - c. Maintenance of existing landscape for soil erosion control.
  - d. Maintenance of plant materials identified to be rare or essential to the well-being of protected species.

- e. Maintenance of landscape within active public parks and playing fields, day-care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two (2) days per week according to the schedule established in Rule 1-K-3b(i) and time restrictions in Rule 1-L-2h.
  - f. Actively irrigated environmental mitigation projects.
- (ii) **Obligations to Fix Leaks, Breaks or Malfunctions:** All leaks, breaks or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty-four (24) hours of notification as set forth in Rule 1-L-2b unless other arrangements are made with the District.
  - (iii) **No New Potable Water Service:** Upon declaration of a Level 3 Water Supply Shortage Emergency, no new potable water service will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as will-serve letters, certificates, or letters of availability) will be issued, except under the following circumstances:
    - a. A valid, unexpired building permit has been issued for the project; or
    - b. The project is necessary to protect the public health, safety, and welfare; or
    - c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District.

This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less.

1-K-5 **NO NEW ANNEXATIONS:** Upon the declaration of a Level 3 Water Supply Shortage condition, the District will suspend consideration of annexations to its service area. This subsection does not apply to boundary corrections and annexations that will not result in any increased use of water. <sup>176</sup>

1-K-6 **DISCONTINUED SERVICE:** The Director, in his or her sole discretion, may discontinue service to consumers who willfully violate the Level 3 Water Supply Shortage provisions. <sup>176</sup>

1-K-7 **PROCEDURES FOR DETERMINATION/NOTIFICATION OF WATER SUPPLY SHORTAGE** <sup>176</sup>

1-K-7a **DECLARATION AND NOTIFICATION OF WATER SUPPLY SHORTAGE:** The existence of a Level 1, Level 2 or Level 3 Water Supply Shortage condition shall be declared by the District Board or Engineer. If the declaration is made by the Engineer, the Engineer shall

seek ratification of the declaration from the District Board at its first meeting following the declaration. Upon such declaration, all District customers shall be notified in writing of the applicable mandatory conservation measures, the date the measures are to take effect and, by reference to rule 1-L-4a of these Rules and Regulations, the penalties that may be imposed for failing to comply with the measures.<sup>176</sup>

1-K-8

**HARDSHIP WAIVER:** <sup>176</sup>

1-K-8a

**UNDUE AND DISPROPORTIONATE HARDSHIP:** If, due to unique circumstances, a specific requirement of this section would result in undue hardship to a person using water or to property upon which water is used, that is disproportionate to the impacts to water users generally or to similar property or classes of water users, then the person may apply for a waiver to the requirements as provided in this section.

1-K-8b

**WRITTEN FINDING:** The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to a person using water or to a property upon which water is used, that is disproportionate to the impacts to water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

- (i) **Application:** Application for a waiver shall be on a form prescribed by the District and shall be accompanied by a non-refundable processing fee in an amount set by the District.
- (ii) **Supporting Documentation:** The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant
- (iii) **Required Findings for Waiver:** An application for a waiver shall be denied unless the Approval Authority finds, based upon the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the District, all of the following:
  - a. That the waiver does not constitute a grant of special privilege inconsistent with the limitations upon other residents and businesses;
  - b. That because of special circumstances applicable to the property or its use, the strict application of this section would have a disproportionate impact on the property or use that exceeds the impacts to residents and businesses generally;
  - c. That the authorizing of such waiver will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the District to effectuate the purpose of this section and will not be detrimental to the public interest; and

- d. That the condition or situation of the subject property or the intended use of the property for which the waiver is sought is not common, recurrent or general in nature.

1-K-8c **APPROVAL AUTHORITY:** The Director shall have approval authority and act upon any completed application no later than twenty (20) days after submittal and may approve, conditionally approve, or deny the waiver. The applicant requesting the waiver shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a waiver is approved, the waiver will apply to the subject property during the term of the mandatory water supply shortage condition. <sup>176</sup>

1-K-8d **APPEALS TO THE DISTRICT:** An applicant may appeal a decision by the Director to deny or conditionally approve a waiver application by filing a written request for hearing with the Engineer within ten (10) days of Director's decision. The request for hearing shall state the grounds for the appeal. At a public hearing, the Engineer shall act as the Approval Authority and review the appeal in accordance with the standards established in this rule. The decision of the Engineer is final. <sup>176</sup>

## **PART 1 - SECTION L - PERMANENT WATER CONSERVATION MEASURES**

### **RULE**

1-L-1 **WATER SAVING DEVICES:** All new customers shall install and use the following water efficient plumbing fixtures:

- (i) Ultra low volume toilets (1.6 gallons per flush or less).
- (ii) Low flow shower heads (2.0 gallons per minute or less).

1-L-2 **WATER WASTE PROHIBITED:** <sup>177</sup> No person shall use or permit the use of District water as follows:

1-L-2a Watering of turf, ornamental landscape, open ground crops and trees, in a manner or to an extent which allows water to run to waste. <sup>177</sup>

1-L-2b In any manner such that the escape of water through leaks, breaks, or malfunctions within the water user's plumbing or distribution system occurs for any period of time beyond which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of forty-eight hours after the water user discovers such leak, break, or malfunction, or receives notice from the District of such condition, whichever occurs first, is a reasonable time within which to correct such condition. <sup>64</sup>

1-L-2c Using water to wash or clean a vehicle, including but not limited to washing automobiles, trucks, trailers, boats, or other types of mobile equipment, without the use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility. <sup>177</sup>

- 1-L-2d Operating any ornamental fountain, or similar structures, unless water for such is recycled for lawful reuse without substantial loss. <sup>64</sup>
- 1-L-2e Washing down hard or paved surfaces, including but not limited to washing of sidewalks, walkways, driveways, parking lots or any other hard-surfaced areas by hose or flooding, except as otherwise necessary to prevent or eliminate conditions dangerous to the public health and safety or for other legitimate uses approved by the District, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, a low-volume high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom. <sup>177</sup>
- 1-L-2f Serving water in eating or drinking establishments, including but not limited to restaurants, hotels, cafés, bars or other public places where food or drinks are sold or served, to customers without first being expressly requested by the customer. <sup>177</sup>
- 1-L-2g For any indiscriminate running of water or washing with water not otherwise prohibited above which is wasteful and without reasonable purpose. <sup>64</sup>
- 1-L-2h Watering of residential, commercial, industrial, and governmental outdoor irrigation from 9:00 a.m. to 4:00 p.m. except for a short duration, not to exceed 3 minutes per station, for the limited purpose of testing or making repairs to the irrigation system. Agricultural customers are exempt from this irrigation schedule, but must comply with agricultural irrigation schedules determined by the District. <sup>177</sup>
- 1-L-2i Running of water or spraying of water onto other properties. <sup>177</sup>
- 1-L-2j Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended for more than ten (10) minutes watering per day per station. This rule does not apply during the establishment period, as determined by the District, for new landscaping. <sup>177</sup>
- 1-L-2k For laundry purposes by hotels, motels and other commercial lodging establishments, except where customers are given the option of not having towels and linens laundered daily through the prominent display of written notice of such option in each bathroom using clear and easily understood language. <sup>177</sup>
- 1-L-2l Through the installation of single pass cooling systems in buildings requesting new water service. <sup>177</sup>
- 1-L-2m Through the installation of non re-circulating water systems in new commercial conveyor car wash and new commercial laundry systems. <sup>177</sup>
- 1-L-2n Through the use of non-water conserving dish wash spray valves by food preparation establishments, such as restaurants and cafes. <sup>177</sup>



1-L-2o Through a commercial conveyor car wash operating without a re-circulating water system, or without first securing a waiver of this requirement from the Director. 177

1-L-3 **IRRIGATION SCHEDULES:** District may impose irrigation schedules for outdoor use, including agricultural use, to address water conservation and limited water supply.

1-L-4 **FAILURE TO COMPLY:**

1-L-4a **CIVIL PENALTIES:** In addition to any other penalties or sanctions provided by law, the following civil penalties shall be imposed for violation of any of the provisions of these rules, to be paid by the customer at the premises at which the violation occurred: 177

- (i) For the first violation of any of the provisions of these rules a written notice will be given to the customer.
- (ii) For the second violation of any of the provisions of these rules within the preceding (12) twelve calendar months, a penalty of one hundred dollars (\$100.00) shall be imposed by written notice to the customer. This penalty is payable as part of the water bill, by the customer at the premises at which the violation occurred.
- (iii) For the third violation of any of the provisions of these rules within the preceding (12) twelve calendar months a penalty of two hundred and fifty dollars (\$250.00) shall be imposed by written notice to the customer. This penalty is payable as part of the water bill, by the customer at the premises at which the violation occurred.
- (iv) For the fourth violation of any of the provisions of these rules within the preceding twelve (12) calendar months, a penalty of five hundred dollars (\$500.00) shall be imposed by written notice to the customer. This penalty is payable as part of the water bill, by the customer at the premises at which the violation occurred.

The District may also give written notice to the customer indicating that it will install a flow restricting device of 1 GPM capacity for services up to one and one half inch meter size, and comparatively sized restrictors for larger services, on the service of the customer at the premises at which the violation occurred for a period of not less than forty-eight (48) hours. The charge for installing such a flow restricting device will be based upon the size of the meter and the actual cost of installation. The charge for removal of the flow restricting device and restoration of normal service shall be based on the actual cost involved. Said charges shall be payable by the customer as part of the water bill. Restoration of normal service will be performed during the hours of 8:00 a.m. to 4:00 p.m. on regular working days. In addition, a surcharge penalty of \$100.00 shall be imposed for restoration of normal service, payable by said customer as part of the water bill.

- (v) If there are five violations of any of the provisions of these rules within twelve (12) consecutive calendar months, the District may, following notice to the customer as described herein, discontinue water service to the customer at the premises at which the violation occurred.

1-L-4b , **NOTICE:** The District will give notice of each violation to the customer at the premises at which the violation occurred, as follows: 177

- (i) For a first, second, or third violation, the District may give written notice of such violation to the customer personally or by regular mail.
- (ii) If the penalty assessed is, or includes the installation of a flow restrictor or the discontinuance of water service to the customer for any period of time whatever, notice of the violation will be given in the following manner:
  - a. By giving written notice thereof to the customer personally; or
  - b. If the customer is absent from or unavailable at the customer's billing address, place of residence, or place of business, by leaving a copy with an adult at such places, and by sending a copy through the United States mail addressed to the customer at such places, via registered mail return receipts requested.
  - c. If notice as provided in a and b above, is not successful, notice can be given by affixing a copy in a conspicuous place on the property where the failure to comply has occurred and also by delivering a copy to a person residing at the premises, if such person can be found.
  - d. All notices will contain, in addition to the facts of the violation, a statement of the possible penalties for each violation, a statement informing the customer of his or her right to a hearing on the violation, a brief summary of the appeal process specified herein, copies of Rules 1-L-4c and 1-L-4d, and the date and time installation of the restrictor or discontinuance of the service will occur.

1-L-4c **HEARING:** Any customer against whom a penalty is to be levied pursuant to this section shall have a right to a hearing, in the first instance by the Director, with the right of appeal to the Engineer or his or her designee, on the merits of the alleged violation, upon the written request of that customer to the Director within fifteen (15) days of the date of giving notice of the violation. Penalties, including termination of water service, will be stayed until any such hearing is conducted and a written decision is made by the Director or his or her designee and given to the customer. 177

1-L-4d **APPEAL OF DECISION OF DIRECTOR:** A request for an appeal must be in writing and filed with the Engineer or his or her designee. The filing by a customer of a request for an appeal for any form of relief must be made

within fifteen (15) days of the giving of the decision of the Director to the customer. Filing of such a request will automatically stay the implementation of the proposed course of action, pending the decision of the Engineer or his or her designee. No other or further stay will be granted. The appeal hearing will be scheduled to occur within a reasonable, prompt period of time following the written notice of appeal. The customer may present any evidence that would tend to show that the alleged wasteful water use has not occurred. Formal rules of evidence will not apply and all relevant evidence customarily relied upon by reasonable persons in the conduct of serious business affairs will be admissible, unless a sound objection warrants its exclusion by the Engineer or his or her designee. The decision of the Engineer or his or her designee shall be final. <sup>177</sup>

1-L-4e      **RECONNECTION:** Where water service is disconnected, as authorized above, it will be reconnected upon correction of the condition or activity and the payment of the estimated reconnection charge.

1-L-4f      **PUBLIC HEALTH AND SAFETY:** Nothing contained in these rules shall be construed to require the District to curtail the supply of water to any customer when, in the discretion of the Engineer or his or her designee, such water is required by that customer to maintain an adequate level of public health and safety. <sup>177</sup>

## **Appendix H**

### **Fox Canyon Groundwater Management Agency Groundwater Management Plan, May 2007 and Applicable Ordinances**

**GMP available online at;  
<http://www.fcgma.org/publicdocuments/plans/GMA%20Management%20Plan-Final%20051506x%20electronic%20v2.pdf>**

**(DWR copy on enclosed CD)**

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# **Fox Canyon Groundwater Management Agency**

## **Ordinance Code**

Adopted July 27, 2005

Amended July 28, 2010

### **CHAPTER 1.0**

#### **Definitions**

As used in this code, the following terms shall have the meanings stated below:

- 1.1. **“Actual Applied Water”** – means the total water applied by the grower to the crop over the course of a calendar year without regard to the water source. Examples of actual applied water include the sum of well water, water delivered from a water supplier, and or from surface water diversions. Total applied water does not include precipitation.
- 1.2. **“Agency”** means the Fox Canyon Groundwater Management Agency.
- 1.3. **“Agency Boundary”** shall be as depicted on the map adopted by the Board and recorded as an official record with the County Recorder's Office on January 14, 2002 (Document No. 2002-0009215), and as may be adjusted as provided in the Agency's enabling legislation.
- 1.4. **“Agricultural Extraction Facility”** means a facility from which the groundwater produced is used on lands in the production of plant crops or livestock for market, and uses incidental thereto.
- 1.5. **“Annual”** means the calendar year January 1 through December 31.
- 1.6. **“Aquifer”** means a geologic formation or structure that yields water in sufficient quantities to supply pumping wells or springs. A confined aquifer is an aquifer with an overlying less permeable or impermeable layer.
- 1.7. **“Board”** means the Board of Directors of the Fox Canyon Groundwater Management Agency.
- 1.8. **“County”** means the County of Ventura.
- 1.9. **“Developed Acreage”** means that portion of a parcel within the Agency Boundary that is receiving water for reasonable and beneficial agricultural, domestic or municipal and industrial (M & I) use.
- 1.10. **“East Las Posas Basin”** That part of the former North Las Posas Basin that is east of the subsurface anomaly described by significant changes in groundwater levels, as described in the Groundwater Management Plan and located for record purposes on maps as provided in Section 1.20.
- 1.11. **“Excess Extraction”** means those extractions in excess of an operator's extraction allocation or adjusted extraction allocation.

- 1.12. **“Executive Officer”** means the individual appointed by the Board to administer Agency functions, or his/her designee.
- 1.13. **“Exempt Well Operators”** means all well operators operating extraction facilities supplying a single family dwelling on one acre or less, with no income producing operations and those operators granted an exemption by the Board.
- 1.14. **“Expansion Area”** means that portion of land beyond the outer limits of the Agency Boundary in the West, East, and South Las Posas Basins that lies between the Agency Boundary and the crest of the hill or 1.5 miles beyond the Agency Boundary as defined by Map Number Two, entitled Fox Canyon Outcrop, Las Posas Basin, 1995. .
- 1.15. **“Extraction”** means the act of obtaining groundwater by pumping or other controlled means.
- 1.16. **“Extraction Allocation”** means the amount of groundwater that may be obtained from an extraction facility during a given calendar year, before a surcharge is imposed.
- 1.17. **“Extraction Facility”** means any device or method (e.g. water well) for extraction of groundwater within a groundwater basin or aquifer.
- 1.18. **“Foreign Water”** means water imported to the County through the State Water Project facilities or other newly available water as approved by the Board, such as recycled water that would otherwise be lost to the Ocean.
- 1.19. **“Groundwater”** means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water.
- 1.20. **“Groundwater Basin”** means a geologically and hydrologically defined area containing one or more aquifers, which store and transmit water yielding significant quantities of water to wells. For the purposes of this Ordinance Code, groundwater basins that of which either all or a portion or portions thereof are located within the Agency Boundary include, but are not limited to the Oxnard Plain Forebay Basin, Oxnard Plain Pressure Basin, Pleasant Valley Basin, East Las Posas Basin, West Las Posas Basin, South Las Posas Basin and the Arroyo Santa Rosa Basin, as described in the Groundwater Management Plan. The boundaries of these basins are shown on maps that shall be adopted by a Resolution. Groundwater basin boundaries may be modified by a Resolution.
- 1.21. **“Groundwater Management Plan”** means the 2007 Update to the Fox Canyon Groundwater Management Plan or Board-adopted updates to this plan.
- 1.22. **“Historical Extraction”** means the average annual groundwater extraction based on the five (5) calendar years of reported extractions from 1985 through 1989 within the Agency Boundary. This average will be expressed in acre-feet per year. All historical extraction allocations became effective on January 1, 1991.

- 1.23. **“Inactive Well”** An inactive well is a well that conforms to the County Water Well Ordinance requirements for an active well, but is being held in an idle status in case of future need. Idle status means the well is pumped no more than 8 hours during any 12-month period. Inactive wells are not required to have a flowmeter. Pumping to maintain status as an active well under the County Water Well Ordinance shall not exceed 8 hours in a 12 month period, shall be for beneficial use, and shall be estimated and reported to the Agency. Prior to removing a well from idle status, the operator shall install a flowmeter in accordance with the requirements in Chapter 3 of the Ordinance Code.
- 1.24. **“Injection/Storage Program”** means any device or method for injection/storage of water into a groundwater basin or aquifer within the Agency Boundary, including a program to supply foreign water in lieu of pumping.
- 1.25. **“Las Posas Outcrop”** or **“Outcrop”** means the area of Lower Aquifer System surface exposure as defined by Map Number One, Fox Canyon Outcrop, Las Posas Basin, 1982.
- 1.26. **“May”** as used in this Ordinance Code, permits action but does not require it.
- 1.27. **“Flowmeter”** means a manufactured instrument for accurately measuring and recording the flow of water in a pipeline.
- 1.28. **“Municipal and Industrial (M & I) Provider”** means person who provides water for domestic, industrial, commercial, or fire protection purposes within the Agency Boundary.
- 1.29. **“Municipal and Industrial (M & I) Operator”** An owner or operator that supplied groundwater for M & I use during the historical allocation period and did not supply a significant amount of agricultural irrigation during the historical period.”
- 1.30. **“Municipal and Industrial (M & I) User”** means a person or other entity that used or uses water for any purpose other than agricultural irrigation.
- 1.31. **“Municipal and Industrial (M & I) Use”** means any use other than agricultural irrigation.
- 1.32. **“Non-Operating Flowmeter”** – A non-operating flowmeter includes a flowmeter that is out of calibration by plus or minus 5%, and/or a flowmeter that has not been calibrated within the flowmeter calibration schedule adopted by the Board.
- 1.33. **“Operator”** means a person who operates a groundwater extraction facility. In the event the Agency is unable to determine who operates a particular extraction facility, then “operator” shall mean the person to whom the extraction facility is assessed by the County Assessor, or, if not separately assessed, the person who owns the land upon which the extraction facility is located.
- 1.34. **“Ordinance Code”** means the Fox Canyon Groundwater Management Agency Ordinance Code.
- 1.35. **“Overdraft”** means the condition of a groundwater basin or aquifer where the average annual amount of water extracted exceeds the average annual supply of water to a basin or aquifer.

- 1.36. **“Owner”** means a person who owns a groundwater extraction facility. Ownership shall be determined by reference to whom the extraction facility is assessed by the County Assessor, or if not separately assessed, the person who owns the land upon which the extraction facility is located.
- 1.37. **“Perched”** or **“Semi-Perched Aquifer”** means the shallow, unconfined aquifer that overlies the Oxnard Aquifer in Sealing Zone III, as described in the California Department of Water Resources Bulletin No. 74-9.
- 1.38. **“Person”** includes any state or local governmental agency, private corporation, firm, partnership, individual, group of individuals, or, to the extent authorized by law, any federal agency.
- 1.39. **“Recharge”** means natural or artificial replenishment of groundwater in storage by percolation or injection of one or more sources of water.
- 1.40. **“Resolution”** means a formal statement of a decision adopted by the Board.
- 1.41. **“Safe Yield”** means the condition of groundwater basin when the total average annual groundwater extractions are equal to or less than total average annual groundwater recharge, either naturally or artificially.
- 1.42. **“Section”** as used in this Ordinance Code, is a numbered paragraph of a chapter.
- 1.43. **“Semi-Annual Groundwater Extraction Statement”** is a form filed by each operator containing the information required by Section 2.2 and 2.3.1 and shall cover the periods from January 1 to June 30 and from July 1 to December 31 annually.
- 1.44. **“Shall”** as used in this Ordinance Code, is an imperative requirement.
- 1.45. **“Well Flushing”** means the act of temporarily discharging extracted groundwater through a connection located upstream of the water distribution system at the beginning of an extraction cycle. Well flushing is typically performed until the quality of the extracted water is suitable for beneficial use and/or will not damage the distribution system. In some cases, the flushing flows may be discharged upstream of the distribution system, including the flowmeter. Flushing flows discharged upstream of the flowmeter shall be estimated and reported to the Agency in accordance with the requirements accordance with the requirements in Chapter 2 of the Ordinance Code.
- 1.46. **“Well Rehabilitation”** means the act of restoring a well to its most efficient condition by various treatments, development, or reconstruction methods. In most cases, groundwater extracted during well rehabilitation is not discharged through the extraction facility piping and, consequently, is not flowmetered. In these cases, the volume of water extracted shall be estimated and reported to the Agency in accordance with the requirements accordance in Chapter 2 of the Ordinance Code.
- 1.47. **“West Las Posas Basin”** is that part of the former North Las Posas Basin that is west of the subsurface anomaly described by significant changes in groundwater levels, as



described in the Groundwater Management Plan and located for record purposes on maps as provided in Section 1.20.

## **CHAPTER 2.0**

### **Registration of Wells and Levying of Charges**

#### **2.1. Registration of Wells**

2.1.1. Agency Water Well Permit Requirement (No-Fee Permit) – All new extraction facilities constructed within the Agency Boundary shall obtain a no-fee permit from the Agency prior to the issuance of a well permit by the County.

2.1.2. Registration Requirement – All groundwater extraction facilities within the boundaries of the Agency shall be registered with the Agency within 30 days of the completion of drilling activities or within 30 days after notice is given to the operator of such facility. No extraction facility may be operated or otherwise utilized so as to extract groundwater within the Agency Boundary unless that facility is registered with the Agency, flowmetered and permitted, if required, and all extractions reported to the Agency as required. The operator of an extraction facility shall register his extraction facility and provide in full, the information required to complete the form provided by the Agency that includes the following:

2.1.2.1. Name and address of the operator(s).

2.1.2.2. Name and address of the owner(s) of the land upon which the extraction facility is located.

2.1.2.3. A description of the equipment associated with the extraction facility.

2.1.2.4. Location, parcel number and state well number of the water extraction facility.

2.2. **Change in Owner or Operator** - The name of the owner of each extraction facility, the parcel number on which the well is located along with the names of all operators for each extraction facility shall be reported to the Agency within 30 days upon any change of ownership or operators, together with such other information required by the Executive Officer.

2.3. **Reporting Extractions** - All extractions shall be reported to the Agency. All extractions shall be flowmetered in accordance with the requirements and methods for flowmetering extractions as specified by Chapter 3. In cases where flowmetering is not required, the volume of water extracted shall be estimated and reported to Agency. The Agency shall send a "Semi-Annual Groundwater Extraction Statement" form to each well operator on or about the first week of January and the first week of July each year. Each operator of a registered extraction facility shall enter the necessary information and return the "Semi-Annual Groundwater Extraction Statement" covering all wells they operate on or before the due date. Statements are due on or before February 1st or August 1st annually or thirty days after the date of the letter requesting submittal of the Semi-Annual Statement

for the given period. Statements shall contain the following information on forms provided by the Agency:

2.3.1. The information required under Section 2.1.2 above.

2.3.2. The method of measuring or computing groundwater extractions.

2.3.3. The crop types or other uses and the acreage served by the extraction facility.

2.3.4. Total extractions from each extraction facility in acre-feet for the proceeding six (6) month period.

## **2.4. Groundwater Extraction Charges**

2.4.1. All persons operating groundwater extraction facilities shall pay a groundwater extraction charge for all groundwater extracted after July 1, 1993, in the amount as established by Resolution. Payments are due semi-annually, and shall accompany the statement required pursuant to Section 2.3.

2.4.2. Payments are due forty-five (45) days after the billing date, and payments not received or postmarked by such date due shall be charged interest from and after such date due until payment thereof at the rate of 1.5 percent per month, or part of month that the charge remains unpaid. Late Penalty. The operator shall pay a late penalty for any extraction charge not satisfied by the due and payable date. The late penalty shall be 1½ percent per month, or any portion thereof, of the amount of the unsatisfied extraction charge. The late penalty shall not exceed 100% of the original charge, provided the penalty is paid within 60 days of the due date. If the fee is not paid within the 60 days, the penalty will continue to accrue at 1.5 percent per month with a final maximum of 200% of the original penalty due.

2.4.3. Owners of extraction facilities are ultimately responsible for payment of pumping charges and penalties should an operator not pay. Consequently, owners are charged with providing for this liability in agreements entered into with well operators and water users.

2.5. **Collection of Delinquent Extraction Charges and Late Penalties** - The Board may order that any given extraction charge and/or late penalty shall be a personal obligation of the operator or shall be an assessment against the property on which the extraction facility is located. Such assessment constitutes a lien upon the property, which lien attaches upon recordation in the office of the County Recorder. The assessment may be collected at the same time and in the same manner as ordinary ad valorem taxes are collected, and shall be subject to the same penalties and the same procedure and sale, in case of delinquency as provided for such taxes. All laws applicable to the levy, collection and enforcement of ad valorem taxes shall be applicable to such assessment, except that if any real property to which such lien would attach has been transferred or conveyed to a bona fide purchaser for value, or if a lien of a bona fide encumbrance for value has been created and attaches thereon, prior to the date on which the first installment of such taxes would become delinquent, then the lien which would otherwise

be imposed by this section shall not attach to such real property and an assessment relating to such property shall be transferred to the unsecured roll for collection.

- 2.6. **Use of Extraction Charges and Late Penalties** - Revenues generated from extraction charges and late penalties shall be used exclusively for authorized Agency purposes, including financial assistance to support Board approved water supply, conservation, monitoring programs and water reclamation projects that demonstrate significant reductions in overdraft.

## **CHAPTER 3.0**

### **Installation and Use of Flowmeters for Groundwater Extraction Facilities**

#### **3.1. Installation and Use of Flowmeters**

- 3.1.1. **Installation Requirement** - Prior to extracting groundwater, the operator shall install a flowmeter. With the exception of connections used for well flushing and extraction facilities used by multiple operators, flowmeters shall be installed upstream of all connections to the main discharge line. Flowmetering is not required during well flushing and well rehabilitation; however, the volume of water extracted shall be estimated and reported to the Agency. Flowmeters are not required on inactive wells as defined in this Ordinance Code, nor are flowmeters required for extraction facilities supplying a single family dwelling on one acre or less, with no income producing operations. If more than one operator uses the same extraction facility, flowmeters shall be installed to record the water use of each operator. Well operators were required to install flowmeters on wells by July 1, 1994.
- 3.1.2. **Flowmeter Failure and Back-up Measurement Requirements** - Flowmeters occasionally fail, losing periods of record before the disabled or inaccurate meter is either replaced or repaired. When a flowmeter fails, the operator shall repair or replace the flowmeter within the timeframe specified in a separate Resolution. Flowmeter failures and associated repairs or replacements shall be reported to the Agency together with any other information required by the Executive Officer on or before the due date of the next Semi-Annual Groundwater Extraction Statement. Well operators shall be prepared to provide another acceptable method of computing extractions during these periods of flowmeter failure to avoid the loss of record on wells that require flowmetering under this Ordinance Code.
- 3.1.3. **Back-up Methods** - It is the operator's responsibility to maintain the flowmeter. Any allowable or acceptable backup measurement methods will be specified in a separate Resolution and may be changed as technology improves or changes.
- 3.1.4. **Flowmeter Readings** - Functional flowmeters shall be read and the readings reported semi-annually on the extraction statements required under Section 2.3 above.

- 3.1.5. Inspection of Flowmeters - The Agency may inspect flowmeter installations for compliance with this Ordinance Code at any reasonable time.
- 3.2. **Flowmeter Testing and Calibration** - All flowmeters shall be tested for accuracy at a frequency interval determined by the Board to meet specific measurement standards. Calibration methods and procedures approved by the Board shall be detailed in an adopted Resolution.
- 3.3. **Altering Flowmeters** - Any person who alters, removes, resets, adjusts, manipulates, obstructs, or in any manner interferes or tampers with any flowmeter affixed to any groundwater extraction facility required by this Ordinance Code, resulting in said flowmeter to improperly or inaccurately measure and record groundwater extractions, is guilty of an intentional violation of this Ordinance Code and will be subject to any and all penalties as described in Chapter 8.
- 3.4. **Costs of Testing and Calibration** - All costs incurred with flowmeter testing or calibration shall be the personal obligation of the well owner. Non-compliance with any provision of the flowmeter calibration requirements will subject the owner to financial penalties and/or liens as described below or in Chapter 8 of the Ordinance Code.
- 3.5. **Fees and Enforcement** - If any water production facility within the Agency's boundaries is used to produce water without a flowmeter or with a non-operating flowmeter in excess of the allowable timeframe specified in a separate Resolution, the Agency shall assess a Non-Metered Water Use Fee against the water production facility owner. The amount of the fee shall be calculated as follows:
- 3.5.1 Groundwater extraction facilities - The fee shall be equal to double the current groundwater extraction charge for all estimated water used. Estimates of water used shall be calculated by the operator and approved by the Executive Officer. Any delinquent extraction charge obligations shall also be charged interest at the rate of 1.5 percent per month on any unpaid balances.
- 3.6. Upon violation of any flowmeter provision, the Agency may, as allowed by law, petition the Superior Court of the County for a temporary restraining order or preliminary or permanent injunction prohibiting the well owner from operating the facility or for such other injunctive relief as may be appropriate.

## **CHAPTER 4.0**

### **Protection of the Las Posas Basins**

- 4.1. **This chapter has the following purpose and intent:**
- 4.1.1. To eliminate overdraft from the aquifer systems within the boundary of the East and West Las Posas basins and bring these basins to a "safe yield" condition by the year 2010.

- 4.1.2. To protect the Las Posas outcrop as a source of groundwater recharge into the East and West Las Posas basins.
- 4.1.3. To prevent groundwater quality degradation of the East and West Las Posas basins by influence from the Expansion area.
- 4.1.4. This Ordinance Code is only one means by which these goals will be met.

## **4.2. Anti-degradation and Extraction Prohibition**

### **4.2.1. Extraction Facility Permits.**

- 4.2.1.1. Permit Required - Prior to: (a) initiating any new or increased use of groundwater in the Expansion area, obtained from any source within the Agency including the Expansion area; or (b) constructing a new or replacement extraction facility in the East or West Las Posas basins, or the Expansion area, a permit must be obtained from the Agency as provided in this Chapter. For the purpose of this Chapter, a new or increased use is that which did not exist or occur before June 30, 1988.
- 4.2.1.2. Permit Application - Application shall be made to the Agency on the approved County Water Well Ordinance form available from the County Public Works Agency and shall include all information required by the County Well Ordinance and the following:
  - 4.2.1.2.1. Location of each water well to be used, along with the associated state well number.
  - 4.2.1.2.2. Location(s) of groundwater use, including acreage accurately plotted on copy of the County Assessor's Parcel Map.
  - 4.2.1.2.3. The proposed crop type(s) or Municipal and Industrial use(s) at each location.
  - 4.2.1.2.4. A brief description of the type of irrigation or distribution system and flowmeter to be used.
  - 4.2.1.2.5. The estimated average annual quantity of water use proposed for each location of use.
  - 4.2.1.2.6. An identification of the source of historical allocation to supply the proposed water use by the well.
  - 4.2.1.2.7. An analysis of the potential impacts on the water balance in the Las Posas Basins resulting from the proposed use(s).
- 4.2.1.3. Findings - A permit may only be granted if the Executive Officer finds that the proposed groundwater use will result in no net detriment to the East or West Las Posas Basins by determining that:

- 4.2.1.3.1. The Las Posas outcrop is not exposed to potential degradation of water quality of any type, and
- 4.2.1.3.2. Recharge to the East and West Las Posas Basins from the Las Posas outcrop is not diminished, and
- 4.2.1.3.3. Neither baseline nor efficiency allocation will be used, directly or indirectly, to support groundwater use on the Expansion Area, and (an example of indirect use is using efficiency to supply a demand inside the Agency and using the replaced historical allocation on the outcrop)
- 4.2.1.3.4. No increased or new uses of groundwater from inside the Agency Boundary will be applied on any area outside the Expansion area (or outside the East or West Las Posas boundary).
- 4.2.1.4. Permit Conditions. The Executive Officer may include in the permit granted, any conditions consistent with the purpose of this Chapter, including:
  - 4.2.1.4.1. Any proposed agricultural use shall include the installation of irrigation systems that employ irrigation best management practices consistent with then current industry standards.
  - 4.2.1.4.2. Any proposed municipal or industrial use shall include the installation of systems that employ municipal and industrial best management practices consistent with the then current industry standards.
  - 4.2.1.4.3. A permit term, not to exceed 10 years from the date of issuance.
  - 4.2.1.4.4. Mitigation, monitoring, and periodic reporting, as may be appropriate given the proposed use.

4.2.2. Permit Renewal - Permits may be renewed pursuant to the requirements of Section 4.2.1.

4.3. **Registration of Existing Uses** - The owners of groundwater wells located within the East or West Las Posas basins shall register their wells with the Agency no later than January 1, 2006, through the following procedure:

4.3.1. Registration Form - The Agency shall make available a registration form which shall be completed, and filed with the Agency for each well, which shall include the following:

- 4.3.1.1. Location(s) of all water well(s), along with the associated state well number(s) including offsite well(s) serving the proposed use. Information concerning wells shall also include any other use for the water well.
  - 4.3.1.2. Location(s) of groundwater use for the well including acreage accurately plotted on a copy of the County Assessor's Parcel Map.
  - 4.3.1.3. The proposed crop type(s) or Municipal and Industrial use(s) at each location.
  - 4.3.1.4. A brief description of the type of irrigation or distribution system and flowmeter in use.
  - 4.3.1.5. The estimated average annual quantity of water use at each location and for each well.
- 4.4. **Monitoring** - The Agency shall monitor compliance with this Chapter by reviewing County well permit applications and reported groundwater extractions and by conducting field surveys as may be necessary.
- 4.5 **Unreasonable Uses** - The Agency may commence and prosecute legal actions to enjoin unreasonable uses or methods of use of water within or without the Agency Boundary to the extent those uses or methods of use adversely affect the groundwater supply within the Agency Boundary.

## CHAPTER 5.0

### Reduction of Groundwater Extractions

- 5.1. **Purpose** - The purpose of this Chapter is to eliminate overdraft from the aquifer systems within the boundaries of the Agency and bring the groundwater basins to safe yield by the year 2010. It is not the purpose of this Chapter to determine or allocate water right entitlements, including those, which may be asserted pursuant to California Water Code sections 1005.1, 1005.2 or 1005.4.
- 5.2. **Extraction Allocations**
- 5.2.1. General Limitations
    - 5.2.1.1. The Executive Officer shall establish an operator's extraction allocation for each extraction facility located within the Agency Boundary. The extraction allocation shall be the historical extraction as reported to the United Water Conservation District and/or to the Agency pursuant to Chapter 2 (or its successor), reduced as provided by Section 5.4, or as otherwise provided for in Section 5.6 of this Ordinance Code. An alternative allocation, either baseline or efficiency, may also be approved as explained in Sections 5.6.1.1 and 5.6.1.2. All extraction facilities have an allocation of zero unless the Executive Officer

determines otherwise. The operator may determine whether the annual allocation used shall be either a combination of baseline and historical allocation, or based on an efficiency allocation. All wells used by an operator in any given basin shall be operated on either a combination of historical and baseline or an efficiency allocation except water purveyors as approved by the Executive Officer. As explained by Section 5.6.1.2, an efficiency allocation may not be combined with either a baseline or a historical allocation. Extraction allocations may be adjusted or transferred only as provided in Section 5.3.

- 5.2.1.2. Regardless of allocation, the total water use for agricultural purposes must be at least 60 percent efficient as determined by the formula described in Section 5.6.1.2.4. This 60 percent irrigation efficiency is totally unrelated to the 80 percent efficiency described in Section 5.6.1.2, "Annual Efficiency Extraction Allocation".
- 5.2.1.3. Where an operator operates more than one extraction facility in the same basin, the extraction allocations for the individual facilities may be combined.
- 5.2.1.4. Where there is more than one operator for any agricultural extraction facility, each operator shall be entitled to a pro rata share of the facility's historical allocation based on either usage or acreage irrigated during the historical extraction period. Such pro rata shares shall be determined by the owner of the extraction facility, and this determination shall be subject to the approval of the Executive Officer.
- 5.2.1.5. When an operator is no longer entitled to use an extraction facility, that operator is no longer entitled to any portion of the extraction allocation attributed to that extraction facility.
- 5.2.1.6. A historical allocation is assigned to an extraction facility and a baseline allocation is assigned to the land, both may be used, but neither is owned by the operator.
- 5.2.1.7. Where there is a sale or transfer of a part of the acreage served by any extraction facility, the extraction allocation for that facility shall be equitably apportioned between the real property retained and the real property transferred by the owner of the extraction facility, This apportionment shall be approved by the Executive Officer who may modify the apportionment to assure equity.
- 5.2.1.8. The name of the owner of each extraction facility, the parcel number on which the well is located along with the names of all operators for each extraction facility shall be reported to the Agency with each semi-annual statement and within 30 days of any change of ownership or operators, together with such other information required by the Executive Officer.



- 5.2.1.9. The Executive Officer may, on written request from a land owner or well operator, waive allocation requirements for the extraction of groundwater from the Perched or Semi-perched aquifer of Sealing Zone III when the pumping of that groundwater is specifically for the purpose of lowering the water table to reduce the high water table threat to property, including the root zone of crops, or for dewatering construction sites. The Executive Officer shall require that the groundwater extraction facility used for this purpose be perforated only in the Perched or Semi-perched zone, and shall also require the landowner and/or the operator to protect the Agency from damage potentially caused by transferring water to another location.
- 5.2.2. General Limitations: Special Board Approval Requirements - Notwithstanding any other provisions of this Ordinance Code, the following uses of water resources associated with the aquifers within the Agency may only be undertaken with prior Board approval of and subject to the conditions and restrictions established by the Board.
- 5.2.2.1. Direct or indirect export of groundwater extracted from within the Agency Boundary for use outside the Agency Boundary.
- 5.2.2.2. The direct or indirect use of surface water or Foreign Water from within the Agency outside the Agency in a manner that may adversely affect the groundwater supply within the Agency.
- 5.2.2.3. Application to the Board - To obtain the approval of the Board for any use provided in Sections 5.2.2.1 and 5.2.2.2, application shall be made to the Agency describing the details of the proposed use, including all the following information:
- 5.2.2.3.1. The location of each water well to be used, along with the associated state well number, and/or the location of each surface diversion and a description of the associated water right.
- 5.2.2.3.2. Location(s) of groundwater use, including acreage, accurately plotted on copy of the County Assessor's Parcel Map.
- 5.2.2.3.3. The proposed crop type(s) or Municipal and Industrial use(s) at each location.
- 5.2.2.3.4. A brief description of the type of irrigation or distribution system and flowmeter to be used.
- 5.2.2.3.5. The estimated average annual quantity of water use proposed for each location of use.
- 5.2.2.3.6. An identification of the source of historical allocation, if any, to supply the proposed water use by the well.

5.2.2.3.7. An analysis of the potential impacts on the water balance in any Basin or Subbasin within the Agency Boundaries resulting from the proposed use(s).

5.2.2.4. Findings - The Board may approve the proposed use if, after a public hearing, it finds that the proposed use will result in no net detriment to the Basin, or any subbasin, or aquifer associated with the use, by determining that:

5.2.2.4.1. The proposed use does not result in the material degradation of water quality of any type, or

5.2.2.4.2. Recharge to any aquifer within the Agency is not materially diminished.

5.2.2.4.3. In granting approval to projects subject to this subsection, the Board may impose any conditions as may be appropriate, including limitations on the quantity of water use, term of the approval, and periodic reporting to the Agency.

5.2.3. An operator shall comply with all provisions of this Ordinance Code and Resolutions prior to receiving an extraction allocation.

### **5.3. Adjustments to Extraction Allocations**

5.3.1. Adjustments to extraction allocations may be necessary to provide some flexibility, while still maintaining the goal of reaching a safe yield condition by the year 2010. Adjustments may be accomplished by a transfer, an assignment of historical extraction allocation, or a demonstration of a new water source.

5.3.2. Subject to the provisions in this Section 5.3, transfers of extraction allocation are authorized provided they result in no net detriment to the Basins within the Agency. In making this determination, consideration shall be given to the location of extraction facilities, the aquifer systems being used, potential groundwater quality impacts, and the overall assessment of the cumulative impacts of transfers of extraction allocation.

5.3.3. Types of Transfers of Allocation. When irrigated agricultural land(s) changes to M & I use, a basic extraction allocation of 2 acre-feet per acre shall be transferred. In addition, a historical extraction allocation shall be transferred from the agricultural extraction facility(s) operators to the M & I provider in accordance with the following conditions:

5.3.3.1. When the extraction facility is located on the land transitioning and did not serve other land during the historical allocation determination period, the M & I Operator shall receive a historical extraction allocation of 2 acre-feet per acre per year for the acreage transitioning to M & I use. Any historical allocation in excess of 2 acre-feet per acre for the land transitioning to M & I use shall be eliminated.

- 5.3.3.2. When the extraction facility is located on the land transitioning and served other land during the historical allocation determination period, the historical allocation associated with the transitioning property shall be allocated on a pro rata basis by acreage to the total property served. The pro rata share for the property transitioning shall be eliminated. Two acre-feet per acre per year, based upon the acreage being transferred, shall be provided to the M & I provider.
- 5.3.3.3. When the extraction facility serving the lands transitioning is not located on the land transitioning, the Executive Officer shall determine the allocation on an equitable basis for the remaining properties not transitioning to M & I. Two acre-feet per acre per year, based upon the acreage being transferred, shall be provided to the M & I provider.
- 5.3.3.4. The transfer shall be effective upon the approval of the Executive Officer, taking into account the ongoing use of the property.
- 5.3.3.5. Allocation originating from an agricultural extraction facility shall not be transferred to an M & I use except as provided in this Section 5.3.3.
- 5.3.4. Allocation may be transferred between M & I extraction facilities provided there is no net detriment to the aquifer system. In making this determination, the Executive Officer shall, at a minimum, consider the location of extraction facilities, the aquifer system being used and groundwater quality impacts of the transfer.
- 5.3.5. Transfer of Allocation - Upon request, the Executive Officer may transfer allocation from one agricultural operator to another agricultural operator or from one M & I operator to another M & I operator provided there is no net detriment to the basins and the transfer is equitable. The transfer of allocation will be of indefinite duration, approved on a "case-by-case" basis, and the Executive Officer shall determine the rate of extraction and the point or points of extraction. Requests for the transfer of allocations shall be submitted jointly by the parties involved and shall include the specific details of their proposal. To ensure that there is no net detriment to the aquifer systems, transfers of allocation shall be subject to other conditions as approved by the Board. Transfers of allocation from Agricultural use to M & I use shall only be approved as provided by Section 5.3.3.
- 5.3.6. The Executive Officer may approve a temporary assignment of allocation from one operator to another operator when there is no net detriment to the aquifer system. The temporary assignment shall not exceed one year.
- 5.3.7. Adjustments to M & I Allocations - The Board may adjust the historical allocation of an M & I operator when that operator has supplied groundwater to either an agricultural or M & I user during the historical allocation period and discontinues service to that user. This adjustment may be made by transferring the supplied portion of the historical allocation from the M & I operator to the new user. This adjustment will avoid increased pumping due to windfall allocations that could

otherwise result when the M & I operator discontinues service. To avoid retroactive inequities, where an M & I operator has discontinued service to a user prior to July 1, 2005, the amount of the supplied portion of the historical allocation may be allocated to both the M & I operator and the user.

5.3.8. Historical allocation is subject to adjustment as provided in Section 5.4 below.

5.3.9. Procedures for Adjustment

5.3.9.1. It shall be necessary for the operator of the extraction facility to file a verified Application for Adjustment with the Executive Officer.

5.3.9.2. Adjustments of extraction allocations, pursuant to the Applications for Adjustment, shall be considered for approval by the Board after reviewing the findings and recommendations of the Executive Officer and, if approved, shall be effective for the remainder of the calendar year and for all subsequent calendar years until modified by a subsequent Board approved adjustment.

#### **5.4. Reduction of Extraction Allocations**

5.4.1. Historical extraction allocations, adjusted or otherwise, shall be reduced in order to eliminate overdraft from the aquifer systems within the boundaries of the Agency for agricultural and M & I uses. The reductions shall be as set forth below:

1992 - 1994 extraction allocation = 95% of historical extraction, as adjusted.  
1995 - 1999 extraction allocation = 90% of historical extraction, as adjusted.  
2000 - 2004 extraction allocation = 85% of historical extraction, as adjusted.  
2005 - 2009 extraction allocation = 80% of historical extraction, as adjusted.  
After 2009 extraction allocation = 75% of historical extraction, as adjusted.

5.4.2. Following the appropriate public review, the Board may exempt historical extraction allocations from these adjustments on a basin-by-basin basis.

#### **5.5. Exemptions from Reductions**

5.5.1. The following types of extraction allocations are exempt from the reductions set forth in Section 5.4.1:

5.5.1.1. Baseline Extraction Allocations as set forth in 5.6.1.1.

5.5.1.2. Annual Efficiency Extraction Allocations as set forth in 5.6.1.2.

5.5.1.3. Non-metered Extraction Facilities. Reductions in extraction allocations shall not apply to those extraction facilities as identified in Chapter 3 that do not require flowmeters. Neither retroactive adjustments nor refunds will be made, except that any outstanding surcharges for non-metered extractions that existed prior to June 26, 2002 will be waived.

## 5.6. Alternative Extraction Allocations

5.6.1. As an alternative to historical extractions, the Executive Officer may establish a Baseline or an Annual Efficiency extraction allocation for an operator, as follows:

5.6.1.1. Baseline Extraction Allocations. If no historical extraction exists, or the historical allocation is less than one acre-foot per acre per year, a Baseline extraction allocation may be established by the Executive Officer at one acre-foot per acre per year.

5.6.1.1.1. A Baseline Extraction Allocation specifically applies to undeveloped acreage that is being developed and once approved shall remain with that developed acreage. A Baseline allocation may be combined with a historical allocation for commonly operated facilities in the same basin. A baseline allocation shall not be used with an efficiency allocation.

5.6.1.1.2. To obtain a Baseline Extraction Allocation, a detailed report must be submitted to the Executive Officer. The report shall describe the historical extraction of groundwater use, if any, during the period between the end of calendar year 1984 and the end of calendar year 1989, the type (crop type or M & I) and the amount of water use and acreage involved. The report shall include copies of Assessor's maps identifying the parcels where groundwater is presently being used. For the purpose of this ordinance, one (1) acre-foot per acre per year represents a reasonable use of water for a Baseline extraction allocation.

5.6.1.1.3. Application for the initial Baseline Extraction Allocation must be submitted prior to submission of the annual report of pumping. If approved, the Baseline Extraction Allocation shall apply beginning with the current calendar year.

5.6.1.1.4. To facilitate accounting procedures, an operator shall use Baseline Extraction Allocation before using Historical Allocation.

5.6.1.2. Annual Efficiency Extraction Allocation - If an operator can demonstrate to the Executive Officer that water used for agriculturally developed land is at least 80 percent overall irrigation efficient, based on evapotranspiration requirements, an Annual Efficiency extraction allocation shall be established for one calendar year. An 80 percent overall irrigation efficiency has been determined by the Agency to be reasonable on agricultural lands within the Agency's boundaries.

5.6.1.2.1. An Efficiency Allocation may be used when no historical allocation exists or when the historical allocation is not

sufficient for the crop being grown. A historical allocation shall not be used in conjunction with an efficiency allocation.

5.6.1.2.2. To prove that irrigation efficiency is at least 80 percent, the operator must submit a detailed report covering a minimum period of the immediately preceding calendar year. This report shall be submitted to the Executive Officer no later than February 1st of the following year unless otherwise extended by the Board. The report shall include a complete crop and irrigation history for the extraction facility and actual acreage irrigated. The report shall include the reference evapotranspiration (ET<sub>o</sub>) rates and crop factors (K<sub>c</sub>) for the calendar year period similar to that provided by the California Irrigation Management Information System (CIMIS) as developed and modified by the California Department of Water Resources. The report shall include a summary sheet that compares the water use to the evapotranspiration requirements for each crop and the corresponding acreage covered in the calendar year. The Board may extend the time to apply for an efficiency allocation for any year.

5.6.1.2.3. Irrigation efficiency will include an appropriate amount of water necessary to avoid salt build-up based on the quality of irrigation water used.

5.6.1.2.4. Irrigation Efficiency (I.E.) will be calculated using the following formula:

$$I.E. = \frac{[ET_o \times K_c] - ER \times 100}{\text{Actual Water Applied (inches)}}$$

Where:

ET<sub>o</sub> is the reference evapotranspiration measured in inches.

K<sub>c</sub> is a crop factor, which is a dimensionless number that relates water use by a given plant in comparison to ET<sub>o</sub>.

ER is the effective rainfall measured in inches as determined by the Executive Officer.

5.6.2. Exceptions - The Board may grant exceptions to Sections 5.6.1.1 and 5.6.1.2 on a case-by-case basis. However, individual exceptions shall not become the norm. Where agricultural efficiency cannot be measured as set forth in Section 5.6.1.2, then the most efficient practices of record for the type of agricultural use shall be the measurement of efficiency utilized by the Board in its deliberations.

## 5.7. Credits

- 5.7.1. Credits can be obtained by operators, but are not considered as extraction allocations or adjustments to extraction allocations. Credits are not subject to any reductions as set forth in Section 5.4.1. Credits, if available, shall be used to avoid paying extraction surcharges. Credits shall be accounted for through the normal reporting and accounting procedure and are carried forward from year to year. Except as provided below, credits may be transferred between commonly operated extraction facilities and within the basin where the credits were earned.
- 5.7.2. The Board may transfer credits between facilities that are not commonly operated within a basin or beyond the basin where such credits were earned, provided that there is no net detriment to the aquifers within the Agency. In determining whether there is no net detriment, the Board may, among other things, consider whether the transfer will help bring the aquifers within the Agency into equilibrium or whether the transfer is a part of an Agency or inter-Agency management plan or program to bring the aquifers of the Agency into balance. Also, in making this determination of no net detriment the Board may consider quality of water as well as the quantity. The transfer of credits will be of indefinite duration, approved on a "case-by-case" basis, and the Executive Officer shall determine the rate of extraction and the point or points of extraction.
- 5.7.2.1. Requests for the transfer of credits shall be submitted jointly by the parties involved and shall include the specific details of their proposal. To ensure that there is no net detriment to the aquifer systems, transfers of credits shall be subject to other conditions as approved by the Board. Under no circumstances shall credits earned as a result of agricultural use be transferred to an M & I Provider, M & I Operator or an M & I User unless the transfer is specifically approved by the Board and no net detriment to the aquifer systems involved can be shown. Credits earned by an M & I facility shall remain with that facility unless transferred by the Board or transferred as part of a program such as an Agency or inter-Agency management plan or program approved by the Board. The types of credits are:
- 5.7.2.1.1. Conservation credits - An operator can obtain conservation credits by extracting less groundwater than the historical extraction allocation. Annual Efficiency, Baseline, or an allocation assigned to an extraction facility that is not required to have a flowmeter shall not earn credits. Credits shall be determined by the Executive Officer after receipt of annual extraction data. Subsequent to determining the amount of credits earned, a confirmation shall be mailed to the operator indicating the current allocation, the groundwater extracted during the previous calendar year, and the credits or surcharges for the previous year.
- 5.7.2.1.2. Storage credits - An operator may obtain storage credits for water that has been determined by the Board to qualify for

credits or foreign water stored, injected or spread and percolated or delivered in lieu of pumping in a Board approved injection/storage program used within the Agency Boundary. A written application for approval of a program or an injection/storage facility shall include:

- 5.7.2.1.2.1. Operator of proposed injection/storage program.
- 5.7.2.1.2.2. Purpose of proposed injection/storage program.
- 5.7.2.1.2.3. Location, depth, casing diameter, perforated interval and other information regarding proposed injection/extraction facilities, if applicable.
- 5.7.2.1.2.4. Method of operation including source, quantity and quality of water, planned scheduling of storage, injection/extraction, delivery or percolation operations and proposed use of extracted water.
- 5.7.2.1.2.5. Any other information deemed necessary by the Executive Officer.

5.7.3. Following Board approval of the application, successful storage, delivery or injection of water and reporting of results, an operator will obtain credit as determined by the Executive Officer.

## **5.8. Extraction Surcharges and Late Penalty**

### **5.8.1. Necessity for Surcharges**

5.8.1.1. Extraction surcharges are necessary to achieve safe yield from the groundwater basins within the Agency and shall be assessed annually when annual extractions exceed the historical and/or baseline allocation for a given extraction facility or the combined sum of historical allocation and baseline allocation for combined facilities. The extraction surcharge shall be fixed by the Board and shall be based upon (1) the cost to import potable water from the Metropolitan Water District of Southern California, or other equivalent water sources that can or do provide non-native water within the Agency jurisdiction; and (2) the current groundwater conditions within the Agency jurisdiction.

5.8.2. At the discretion of the Board, the extraction surcharge may be structured, tiered, and varied between basins and or aquifers.

5.8.3. The Board shall fix the surcharge by Resolution at a cost sufficiently high to discourage extraction of groundwater in excess of the approved allocation when that extraction will adversely affect achieving safe yield of any basin within the



Agency and may adjust the surcharge by Resolution; provided however, that the then existing extraction surcharge shall remain in effect until adjusted by the Board.

5.8.4. Surcharge for No Allocation - In circumstances where an individual or entity extracts groundwater from a facility(s) having no valid extraction allocation, the extraction surcharge shall be applied to the entire quantity of water extracted. Imposition and acceptance of payment of the surcharge imposed on an individual or entity that extracts water from a facility(s) that holds no extraction allocation shall not be deemed a waiver of the Agency's authority to limit or enjoin the unauthorized extractions.

5.8.5. Efficiency Surcharge Facilities relying on the annual efficiency allocation shall also be subject to surcharge for inefficient use. The extraction allocation for efficiency is the amount of water used at 80% efficiency as defined in 5.6.1.2 of this ordinance. Extraction surcharges will be applied to the difference between the water extracted which correlates with the actual efficiency achieved and the water that would have been extracted to attain the 80% efficiency allocation. For example, an actual efficiency of 70% would be subject to surcharges on the difference between the amount of water used at 70% efficiency and the amount of water that would have been used at 80% efficiency. If an efficiency of less than 60% is achieved, no efficiency allocation will be available, and the operator shall revert to a historical, baseline or to no allocation whichever applies to that facility. Extraction surcharges would then apply to the difference between actual water used and the applicable allocation, if any. For example, a facility operating at an actual efficiency of 59% with no historical or baseline allocation, would be subject to surcharges on all water used.

#### 5.8.6. Payment of Extraction Surcharges

5.8.6.1. Surcharges are assessed annually with respect to the annual allocation and shall become due and payable by the owner/operator on February 1<sup>st</sup> each year or 30 days after the date shown on the "Semi-Annual Groundwater Extraction Statement." Payments shall be made with credits, if available. The Board may extend the 30-day time allowed to pay surcharges for a period of up to twelve months when circumstances exist that in the opinion of the Board warrant such extension. The Board may also approve the payment of surcharges in installments of up to 24 months with terms suitable to the Board.

5.8.6.2. Late Penalty - The operator shall pay a late penalty for any extraction surcharge not satisfied by the due and payable date. The late penalty shall be 1.5 percent per month, or any portion thereof, of the amount of the unsatisfied extraction surcharge. The late penalty shall not exceed 100% of the original surcharge, provided the penalty is paid within 60 days of billing. If the fee is not paid within the 60 days, the penalty will continue to accrue at 1.5 percent per month with a final maximum of 200% of the original penalty due.

- 5.8.6.3. Collection of Delinquent Extraction Surcharges and Late Penalties - The Board may order that any given extraction surcharge and/or late penalty shall be a personal obligation of the operator or shall be an assessment against the property on which the extraction facility is located. Such assessment constitutes a lien upon the property, which lien attaches upon recordation in the office of the County Recorder. The assessment may be collected at the same time and in the same manner as ordinary ad valorem taxes are collected, and shall be subject to the same penalties and the same procedure and sale, in case of delinquency as provided for such taxes. All laws applicable to the levy, collection and enforcement of ad valorem taxes shall be applicable to such assessment, except that if any real property to which such lien would attach has been transferred or conveyed to a bona fide purchaser for value, or if a lien of a bona fide encumbrance for value has been created and attaches thereon, prior to the date on which the first installment of such taxes would become delinquent, then the lien which would otherwise be imposed by this section shall not attach to such real property and an assessment relating to such property shall be transferred to the unsecured roll for collection.
- 5.8.6.4. Use of Extraction Surcharges and Late Penalties - Revenues generated from extraction surcharges and late penalties shall be used exclusively for authorized Agency purposes, including financial assistance to support Board approved water supply, conservation, monitoring programs and water reclamation projects that demonstrate significant reductions in overdraft.

## **CHAPTER 6.0**

### **Appeals**

- 6.1. Any person aggrieved by a decision or determination made by the Executive Officer may appeal to the Board within forty-five (45) calendar days thereof by filing with the Clerk, or Deputy Clerk, of the Board a written request that the Board review the decision of the Executive Officer. The Board shall equitably act on the appeal within 120 days after all relevant information has been provided by the appellant.

## **CHAPTER 7.0**

### **Severability**

- 7.1. If any section, part, clause or phrase in this Ordinance Code is for any reason held invalid or unconstitutional, the remaining portion of this Ordinance Code shall not be affected but shall remain in full force and effect.

## **CHAPTER 8.0**

### **Penalties**

- 8.1. Any operator or other person who violates the provisions of this Ordinance Code is subject to the criminal and civil sanctions set forth in the Agency's enabling act and its Ordinances.
- 8.2. Any person who intentionally violates any provision of this Ordinance Code shall be guilty of an infraction and may be required to pay a fine to the Agency in an amount not to exceed five hundred dollars (\$500).
- 8.3. Any person who negligently or intentionally violates any provision of this Ordinance Code may also be liable civilly to the Agency for a sum not to exceed one thousand dollars (\$1,000) per day for each day of such violation, in addition to any other penalties that may be prescribed by law.
- 8.4. Upon the failure of any person to comply with any provision of this Ordinance Code, the Agency may petition the Superior Court for a temporary restraining order, preliminary or permanent injunction, or such other equitable relief as may be appropriate. The right to petition for injunctive relief is an additional right to those, which may be provided elsewhere in this Ordinance Code or otherwise allowed by law. The Agency may petition the Superior Court of the County to recover any sums due the Agency.

This Ordinance Code and amendments hereof shall become effective on the thirty-first day after adoption.

# **VENTURA COUNTY WATERWORKS DISTRICT NO. I**

**6767 Spring Road  
Moorpark, CA 93020**